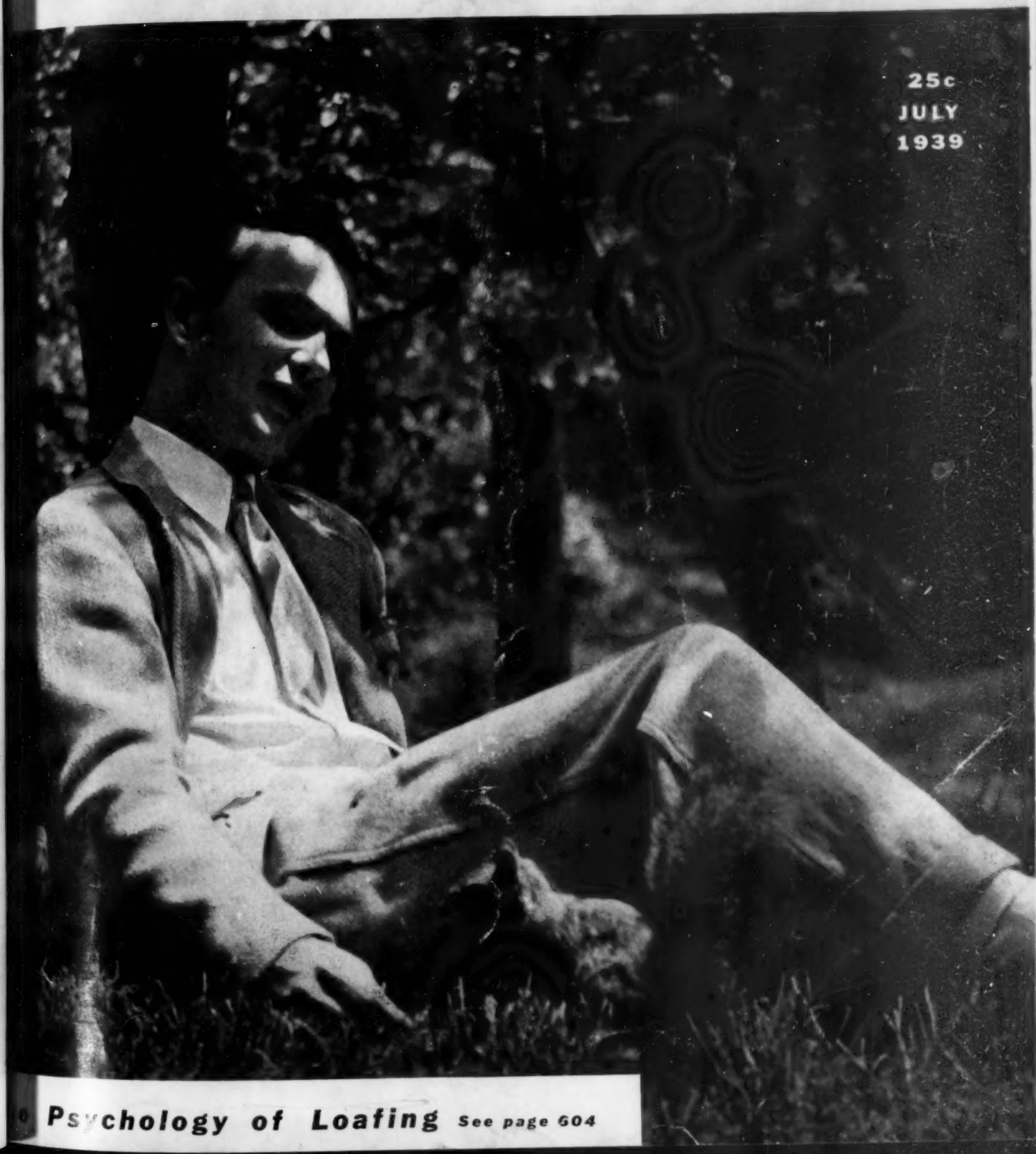
JUN 21 1939

Medical Library

THE HEALTH MAGAZINE

HYGEIA



25c
JULY
1939

Psychology of Loafing See page 604

How much of a threat is the Menopause?

FROM TIME IMMEMORIAL, women have looked upon the years of the menopause as the most dreaded years of their lives.

They have regarded "change of life" as a serious threat to their health, their charm, and their peace of mind. They have visioned it as a time of acute physical and mental distress, and the gateway to sudden old age.

Is the menopause actually the nightmare it is so often pictured?

It need not be. Under the sympathetic and expert care of today's physician, change of life is robbed of most of its terrors.

To the woman entering the menopause, the modern physician can bring alleviation of physical discomfort and nervous distress. He is equipped to combat most of the complications of this period of change.

And he can do another thing. The doctor's knowledge enables him to decide whether the patient's condition is due wholly to menopause, or whether there are manifestations of some entirely different trouble. Left to herself, there is a natural tendency for the woman to blame all her physical ills on change of life. The doctor can quickly identify symptoms—and if there are any that indicate the presence of some other difficulty, he can take corrective steps at once.

With the doctor in the picture, the woman going through this period of glandular readjustment can set her mind at ease. With her physical distress largely banished, she can keep on enjoying life as usual.

And when the menopause is over, there is every reason to believe she will find herself with her charm undimmed and her health unimpaired. She can then look forward serenely to years as happy as any in her life.

Copyright, 1939, Parke, Davis & Co.

PARKE, DAVIS & COMPANY
DETROIT, MICHIGAN
The World's Largest Makers of Pharmaceutical and Biological Products

SEE YOUR DOCTOR

BABIES SUPERVISED BY PHYSICIANS ARE BETTER BABIES

9

Copyright 1939, Mead Johnson & Company, Evansville, Indiana, U.S.A.

WHO'S WHO IN HYGEIA

KENNETH P. WOOD declares he is a Quaker, was "bread and buttered" (born and bred) in the Quaker City (Philadelphia) and is a professional free lance writer. He quit college the second semester to join the Navy during the World War and saw the world through "a mighty small and dirty port-hole." Not that he has that perspective on life, he hastens to tell you, but rather, that is what he thinks about war. Mr. Wood's specialty is "he-man" adventure stories, but he also likes to turn out factual and informative research articles on little-known subjects and on the quirks of human nature. He is 40 years old and still unmarried.

GUNVOR JOHANNESEN is of Norwegian parentage and Wisconsin allegiance. After graduation from Delavan (Wis.) High School, she took up secretarial work. Writing had always been her hobby, and two years of experience on a country newspaper confirmed her belief that journalistic work should be her vocation. However, when her mother died, she had to combine her business career with the job of making a home for her father; later when he also died, she went on to college. She earned her way through the University of Wisconsin by means of her secretarial training and the sale of her articles. This summer finds her working on a series of educational booklets for use in public schools.

LOUIS FAUGERES BISHOP JR., M.D., is a cardiologist and is fond of fishing when he has some leisure time (of which there is probably little). He not only belongs to most of the medical societies, both local and national, but he is a popular speaker, professor and practitioner. He is thoroughly a product of the East, having been born in New York City and educated only in eastern schools. But Dr. Bishop is the "absent minded professor" par excellence, leaving his hat in one place and his coat in another. His secretaries besiege the "lost and found" departments of railroads, subways and theaters. Dr. Bishop is 39, married and the father of four.

LEWIS J. SILVERS, M.D., has made his hobby his life work. As a youth, he was always tinkering around with some electrical gadget, but now as an adult he is conducting serious research in this field. He applies his ability to the alleviation of human suffering in the region of the nose, throat, pharynx and windpipe (the specialty known as otolaryngology). Though he has traveled the length and breadth of the United States, he prefers the quiet of a week-end on a farm in the country.

HYGEIA

THE HEALTH MAGAZINE

Published and copyrighted, 1939, by the American Medical Association. Edited by Morris Fishbein, M.D.

CONTENTS FOR JULY

COVER ..... Steve Heiser

THE CASE OF BRUNSON V. FISHBEIN—An Editorial 582

THE BADGE OF PROTECTION ..... J. D. Ratcliff 585

IT FLOATS THROUGH THE AIR ..... Ramsay Spillman, M.D. 587

HOW SAFE IS THE ROADSIDE RESTAURANT? ..... James E. Browell 590

LUNCH-COUNTER LAMENT—A Poem ..... Winifred Stewart Tower 593

SWIMMING SAFETY ..... Lewis J. Silvers, M.D. 594

THE CHILD WHO HAS HEART DISEASE ..... Louis Faugeres Bishop Jr. 597

CAMP COUNSEL ..... Lawrence Riggs 601

THE PSYCHOLOGY OF LOAFING ..... Kenneth P. Wood 604

HIGHWAY HEALTH ..... Beulah France, R.N. 608

PLENTY OF DROPS TO DRINK ..... Mary Geisler Phillips 611

THE HAZARDS OF CAMP LIFE ..... Gaylord W. Graves, M.D. 614

WHAT THE MOUTH CAN TELL ..... Lester Richard Cahn 618

AMUSING MEDICAL PATENTS ..... S. R. Winters 621

MUSCULAR FATIGUE ..... Ellen Kelly 625

THE DOCTORS CONVENE ..... Lawrence C. Salter 628

RECOMMENDATIONS FOR AUGUST 631

MYSTERIOUS EPIDEMICS IN HISTORY: V ..... Claude Lillingston, M.D. 632

FOR SERVICE TO HUMANITY ..... Jack Sellers 635

TOO GOOD FOR HIS OWN GOOD ..... Motier Harris Fisher 636

NEW TREATMENT FOR PELLAGRA ..... Gunvor Johannesen 639

FOODS AND NUTRITION
- Fruit Juices 643
- Vegetables for Flavor ..... Claribel Adams 648

QUESTIONS AND ANSWERS 652

BOOKS ON HEALTH 654

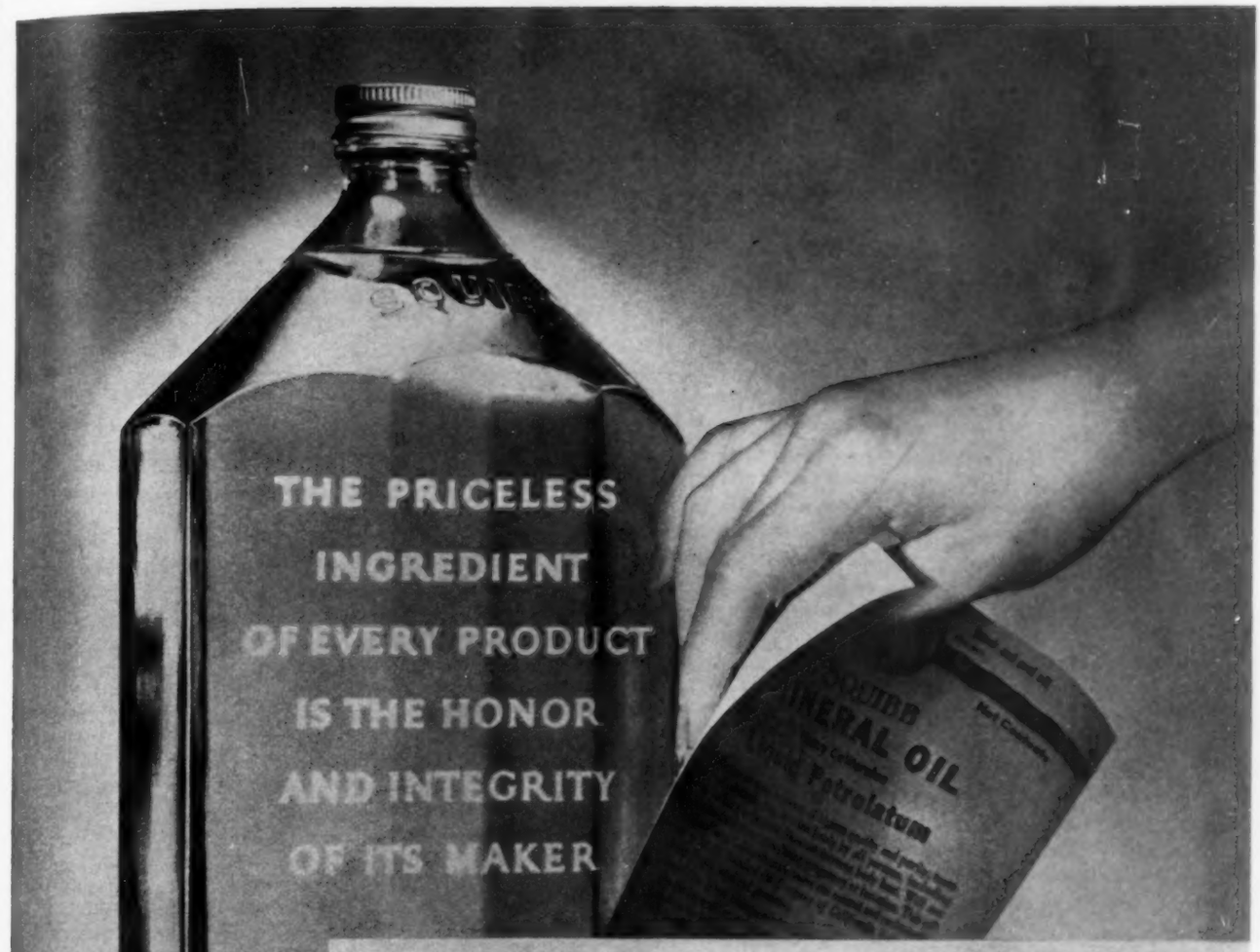
WHAT TO DO ABOUT THUMB SUCKING ..... William I. Fishbein, M.D. 660

SCHOOL AND HEALTH
- Packing That Book Bag—An Editorial 665
- The School Lunch in Education ..... Jean V. Latimer 666
- What Happens to Foods in the Body ..... Ethel Austin Martin 668
- A Lesson in Dental Health Education ..... Harriet M. Fitzgerald 669

MEDICAL NEWS OF THE MONTH 672

HYGEIA, The Health Magazine, is published monthly by the American Medical Association, 535 North Dearborn Street, Chicago, Ill. Yearly subscription price, $2.50; for foreign postage add 75 cents. Single copies, 25 cents. Volume 17, Number 7. Entered as second-class matter March 21, 1923, at the postoffice at Chicago, Ill., under the Acts of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1,103 Act of October 3, 1917, authorized March 21, 1923.

All rights reserved.



Behind the name—the spirit that makes it live

People instinctively turn to a trusted name . . . . The maker who comes to realize this grant of confidence regards it not only as a responsibility but as a great opportunity . . . . It keeps him alert, progressive, striving to justify the faith in his name and to contribute through the coming years an even larger measure of service . . . . The maker who has earned such recognition is invariably guided by the ideal and the belief that in always making a good product there will ultimately develop a sense of security and satisfaction in the mind of the user. Thus is created the immeasurable value of good will—the urge to return again and again to the name which has proved its worth.

E.R. SQUIBB & SONS

MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

LETTERS FROM *Readers*

Good Information

To the Editor:

More power to Howard Dittrick! Although I have been happily married for ten years (thanks to an understanding wife) all around us we can see broken and unhappy homes, mainly for the lack of clear, concise articles like this. How much more effective it is to give advice on how to make a successful marriage than to quote statistics on divorce and its pitfalls and heartaches. The time may come (and soon I hope) when psychiatrists and M.D.'s will work hand in hand and by building successful marriages will benefit not only this generation but all that come hereafter.

JOHN J. McDOWELL

Easton, Pa.

▲

Perpetuating Superstitions About Canned Foods

To the Editor:

In the past we have deeply appreciated the fair and unbiased treatment accorded canned foods in replies made to inquiries concerning such foods in the "Questions and Answers" section of your magazine. In the same spirit of fairness we ask you to give space to this reply to statements regarding canned foods made in the 1939 edition of the book "The Modern Home Physician," by Victor Robinson, which some of your readers may have noted.

On pages 334 and 335 of this book, under the subject "Dangers Lurking in the Can," the author displays total unfamiliarity both with the basic principle of canning and with the packing and heat-processing of canned foods. In fact, he also displays ignorance of the type of can commonly used by modern canners. In view of these circumstances, it is not surprising to find that the author regards food stored in—or even taken from—the can as "dangerous."

In this connection, your readers will be interested in the following statement issude in 1936 by the Bureau of Home Economics, U. S. Department of Agriculture:

> It is just as safe to keep canned food in the can it comes in — if the can is cool and covered—as it is to empty the food into another container. Thousands of housewives are firm in the faith that canned goods ought to be emptied as soon as the can is opened, or at least before the remainder of the food goes into the refrigerator — one of the persistent food fallacies. The question keeps coming to the Bureau of Home Economics in letters from Homemakers.
>
> A few acid foods may dissolve a little iron from the can, but this is not harmful, not dangerous to health. Cans and foods are sterilized in the "processing." But the dish into which the food might be emptied is far from sterile. In other words, it is likely to have on it bacteria that cause food to spoil.
>
> Whether in the original can or in another container, the principal precautions for keeping food are — Keep it cool and keep it covered.

We would appreciate your bringing these facts to the attention of those of your readers who may have noted the inaccurate and prejudiced statements regarding the safety of canned foods made in this text.

GEORGE W. COBB JR.
American Can Company

New York City.

▲

Lament

To the Editor:

How can we subscribe for anything to read? Uncle Sam *only* feeds our stomachs, not our minds. We all should have our subscription to HYGEIA; but *how* can we when we can't buy other necessities?

MRS. E. HERMANSON

Knobs, Mont.

Damaging to Quacks

To the Editor:

For many months your magazine has been reaching the home of a dirt farmer. We read a number of first class magazines, and HYGEIA in interest ranks with the best of them. I think it will be damaging to the financial interest of many glamorous quacks and "patent medicine" vendors, but a wonderful help to the health and happiness of the general public.

M. CLYMER

Llano, Texas.

▲

Not So Simple

To the Editor:

In a recent issue of your magazine I read one or two readers' letters which implied that HYGEIA is often too childish. I would like to give you my point of view in regard to this. I am a university student, and in our reading we get so much that is deep and entirely over our heads that it is truly refreshing to come upon a magazine like yours. While it educates, it simplifies and makes the material interesting—to the casual reader and the tired student alike. There are technically written journals published for the professional class; let those who want something deep read these. It is a magazine just such as yours that the common folks are much in need of. Perhaps a backwoods family *would* gain from it; this is the more to your credit, for it is probably that family and others of its kind which are much more in need of the information you give out than those persons who write and find this fault with HYGEIA.

I believe if you eliminate the dramatization quality and your plain simple manner of putting forth your material, you will lose scores of readers.

V. B.

Chicago

We Thank You

To the Editor:

I am a high school student in Washington, D. C., and would like you to know how much HYGEIA means to me. I major in a very excellent course in Personal Hygiene, and countless times HYGEIA has proved itself invaluable. HYGEIA fascinates me, as does everything connected with people, health and medicine. The articles are clear and understandable, creating new interest for me in the things dearest to me. I keenly appreciate your magazine and thank you for HYGEIA.

ELLEN S. ANDERSON

Washington, D. C.

▲

Birth Control

To the Editor:

This brings you the approbation of a very recent subscriber for the editorial, "HYGEIA and Birth Control," in the March issue.

To turn such a publication as yours into a propaganda sheet for birth control would not only be unfortunate but would almost certainly alienate a goodly number of your subscribers.

Congratulations on taking a decided stand against one of the most impudent and shortsighted pressure organizations of our day.

EDWARD S. SCHWEGLER, D.D.,
Sacred Heart Rectory

North Collins, N. Y.

▲

See April Issue

To the Editor:

I have just been reading an excellent article in the March HYGEIA entitled "Adult—Age 21 to 40" by Miriam Townsend Sweeny.

I hope there will be more of this type.

JANET B. MERRILL

Boston

▲

Good Article

To the Editor:

It gave me great pleasure to read in the April number of HYGEIA, "Microbes and Human Life," ["Do Germs Destroy Life?"] The article added 100 lbs. of knowledge to my knowledge.

V. E. SESSNER

Milwaukee

Hygeia in Schools

To the Editor:

HYGEIA is certainly worthwhile. During the last year, I have used it instead of textbooks in my hygiene classes, because all of the material is up to date. Of course it means more work on the part of every one concerned, because we must make use of articles from other magazines and books as supplementary material. But I feel that it is more important and interesting for a girl to know about the cause and treatment of a pain in the side than to study all the minute structures of the body. As soon as they learn that the pain may be due to a diseased appendix, then they want to learn more about the organ. The articles in HYGEIA make possible an ideal approach to a subject which most high school students care nothing about.

LULU F. STILLEY

Physical Education Teacher

Burgettstown, Pa.

▲

Compliments

To the Editor:

Just a line to tell you how many of my friends have enjoyed the March and April articles by Miriam T. Sweeny. Two different people have sent me copies, and I have read them with interest.

"After 40" appeals to me, as I am 50. The one for the young people I gave to my daughter to digest.

Miss Sweeny seems to know her stuff, and she writes well.

MRS. W. P. WATTLES

Washington, D. C.

▲

Information, Please!

To the Editor:

I want to voice my appreciation of the "Who's Who in HYGEIA" column in your magazine. These personalized bits about the authors make them so much more human and add interest and authority to the articles they write. I may have an enlarged "bump of curiosity," but I like to have all the information possible about the person whose advice I am supposed to take. My sincere thanks for these small sketches.

MRS. JOHN ADAMSON

New York City.

PROTECT MOTHER AND BABY

MODERN MOTHER Nursing Brassiere is the only one with interchangeable sterilized pads to absorb all seepage of milk. Prevents sour odor and possible infection.

For mother, it gives scientifically designed support for overstrained muscles. Not a clumsy garment, but a light weight uplift brassiere intended for wear under fashionable clothes. Adjustable shoulder straps.

Bandeau Style, No. 628, for slender figures in sizes 32, 34 and 36. Sold at $1.50. **No. 623** with elastic insert and wider support, $2.00. In sizes 32 to 44.

Combination Maternity and Nursing Brassiere, No. 627, has adjustable back section to allow for increasing development during later months of pregnancy as well as all features of regular Nursing Brassiere, $2.50. In sizes 32 to 44.

Compare MODERN MOTHER Nursing Brassiere before accepting a substitute.

If your dealer cannot supply you with Venus Products, write Dept. H

MODERN MOTHER

PATENTED Nursing Brassiere

VENUS CORPORATION
1170 BROADWAY, New York, N. Y.
Branch: 424 S. Broadway, Los Angeles, Calif.

PAMPHLETS ON "PATENT MEDICINES", QUACKS, ETC.

Published by the Bureau of Investigation of the American Medical Association

CANCER "CURES" AND "TREATMENTS"	Illustrated. 15 cents
CONSUMPTION "CURES," COUGH REMEDIES, ETC.	Illustrated. 15 cents
DEAFNESS "CURES"	Illustrated. 15 cents
EPILEPSY "CURES" AND "TREATMENTS"	Illustrated. 15 cents
FEMALE-WEAKNESS "CURES"	Illustrated. 35 cents
THE GREAT AMERICAN FRAUD	Illustrated. 25 cents
MECHANICAL NOSTRUMS	Illustrated. 15 cents
MEDICAL MAIL-ORDER CONCERNS	Illustrated. 25 cents
MINERAL WATERS	Illustrated. 10 cents
MISCELLANEOUS SPECIALISTS	Illustrated. 20 cents
NOSTRUMS FOR KIDNEY DISEASES AND DIABETES	Illustrated. 15 cents
OBESITY "CURES"	Illustrated. 15 cents
PATENT MEDICINES	Illustrated. 15 cents
TESTIMONIALS	Illustrated. 10 cents

AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street • Chicago

H. Armstrong Roberts

***SUMMER ACTIVITIES** in the open air spell fun and health—laughter, companionship, the good outdoors, exercise and vibrant well-being.*

THE CASE of *BRUNSON v. FISHBEIN*

On Friday June 2 in the Federal Court at El Paso, Texas, Judge Boynton instructed a jury which was hearing the case of *Brunson* v. *Fishbein* to bring in a verdict in behalf of the defendant. In this case the plaintiff, Dr. Asa Brunson, who was treating tuberculosis with inhalations of a secret preparation, felt that he had been damaged because of a telegram sent by Dr. Fishbein to DeWitt Wallace, editor of the *Reader's Digest*. In January 1938 Mary Rose Bradford, wife of Roark Bradford, well known author, sent DeWitt Wallace a telegram asking whether or not he would be interested in an article dealing with the work of Asa Brunson, claiming that Brunson had cured more than 3,000 cases of tuberculosis and that he may be a second Pasteur. Mr. Wallace forwarded the inquiry to Dr. Fishbein, who telegraphed in reply that Dr. Hruby of the Chicago Municipal Tuberculosis Sanitarium had investigated the Holderness-Brunson treatment in 1921 and quoted from an article bearing Dr. Hruby's name which appeared in the Chicago *Herald-Examiner* stating that the method was a dangerous fake. To this quotation Dr. Fishbein added the statement that similar treatments tried elsewhere have also failed.

In defense of the case the American Medical Association produced testimony by three chemists, Schoeffel of the American Medical Association's Chemical Laboratory, Harris of the University of Oklahoma at Norman, Okla., and Muehlberger, chemist and toxicologist for the coroner's office and the Cook County Hospital, all of whom stated that an analysis of the product used by Brunson revealed that it contained approximately 95 per cent liquid petrolatum, 3 per cent oil of eucalyptus, 1.5 per cent mint camphor or menthol, and traces of pine oil and thymol. The American Medical Association also produced in evidence death certificates of a considerable number of persons whose testimonials were being circulated by Brunson as being cured of the disease by his treatment, the death certificates indicating in each instance that the patients had died of tuberculosis. Moreover, testimony relative to the nature of the disease and methods of treatment was supplied by Drs. Allan J. Hruby, Chicago; L. J. Moorman, Oklahoma City; Samuel H. Watson, Tucson, Ariz.; H. J. Corper, Denver, and O. E. Egbert, El Paso, Texas. In addition the Association was prepared to offer Dr. H. S. Randolph of Phoenix, Ariz., and Dr. R. B. Homan of El Paso and a vast number of depositions. There appeared also on the stand on behalf of the American Medical Association Dr. Felix P. Miller of El Paso and Dr. Morris Fishbein. In behalf of the plaintiff, Asa Brunson, there appeared only himself.

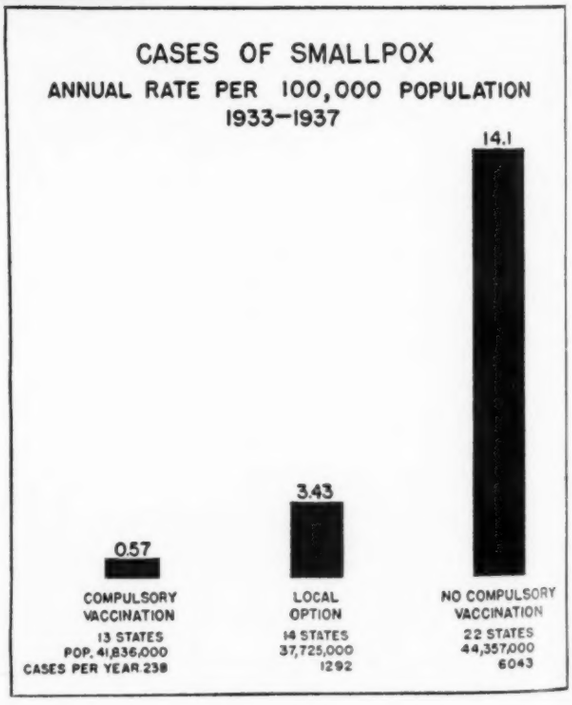
Because of the great educational value of the testimony in this case, it is proposed to publish an abstract of some of the testimony in the Brunson case in HYGEIA. The decision was not only a victory for the American Medical Association in its campaign to protect the public against nostrums and unestablished remedies for serious diseases but also a notable victory for scientific medicine in relationship to the diagnosis and treatment of tuberculosis. The educational value of the trial was incalculably great. Many persons attended the various sessions; the testimony itself will be widely quoted because of its concise presentation of the present status of our knowledge of tuberculosis.

The BADGE

Knowledge of an absolute preventive for smallpox has been available since Edward Jenner made his renowned discovery in 1798. But still there are thousands of persons dying from it every year. It appears as though vaccination made compulsory by state law is all that will eliminate it.

ONE DAY last year William Hinkley, of Oskaloosa, Ia., felt badly. He had a fierce headache, a backache and a temperature of 102 F. A doctor might properly have diagnosed influenza. Then, a few days later, a rash appeared. William Hinkley had smallpox—the current type of mild, nonvirulent smallpox that has broken out in hundreds of places in the United States. Two hundred other people went to bed with the same disease before the thoroughly alarmed townsfolk marched en masse to doctors' offices to be vaccinated.

There is a general disposition to think of smallpox as a disease which had graciously vanished from the earth. The truth is that for five years now, smallpox has been on a steady upward march in this country; actually, some of our states where vaccination is not compulsory



# of PROTECTION

By J. D. RATCLIFF

have a higher rate of infection than most other places in the world! The disease has been particularly prevalent in the Middle West and the Northwest: in Oregon, Illinois, California, North Dakota, Iowa and Missouri. Last year over 14,000 persons had smallpox, a disease which could be completely eradicated if the simple precaution of vaccination were universally adopted.

There is absolutely no reason for the prevalence of smallpox. Against its cruel, disfiguring and often lethal wrath, science has provided as perfect a protection as it has against any disease. It has been available since that day in 1798 when the English physician Dr. Edward Jenner announced his epochal discovery: If men would squeeze a little of the fluid material from a pock on a sick cow and scratch that into their arms, they could escape the disease which regularly sent one out of every ten people to their graves. An idea of how prevalent this disease was at the time is given by the fact that the absence of pock marks on a criminal's face was often used as a means of identification!

For 140 years, millions of people have heeded Jenner's message and been protected. That smallpox is at all prevalent in this country today is only because thousands of children are allowed to go without vaccination, and tens of thousands of adults put blind dependence on the protection they got as children. This carelessness has made smallpox a greater problem in the United States than in any other civilized country.

There are two varieties of smallpox. The milder type, which probably originated in the tropics, has spread to many parts of the United States. Although this strain is not necessarily fatal, it is still a loathsome and prostrating disease. The severe form, known as variola major, is still found in many parts of the world and continues to be the most dreaded of scourges. At any time an individual may import this severe type of smallpox into our country, say from Mexico or India; and in areas where vaccination is not practiced, a wild epidemic, capable of killing six out of every ten persons stricken, may break loose. There is only scant evidence to indicate that the present mild strain will ever develop into a major strain. The significant thing about these mild outbreaks is that they indicate the immunity of the population is low. The ground is ready for the great killer.

Smallpox is caused by a virus so small that it will slither through a porcelain filter, a virus so small that it is visible under only the finest microscopes. How this potent dynamite gets about no one is quite sure. Apparently, it can travel at least a few feet through the air. It is present in the body discharges of the sick. Probably it gets about in a hundred ways, for cases pop up spontaneously without the stricken person having had any intimate contact with another who is sick. This indicates an important role for flies, dust and perhaps even wind.

Once the virus is in an unprotected—or unvaccinated—body, it multiplies for as little as eight and as many as twenty-one days before anything happens. Then suddenly there is a violent headache. And a backache. Body temperature will shoot up. In this early stage the doctor can rarely be sure what is the matter. Then clinching evidence—papules, or solid little welts—appear.

These little red welts crop up on the face and wrists, later spreading to other parts of the body. In the next stage these papules fill with a watery substance which in turn changes to pus. Features become so distorted that the face is almost unrecognizable. The crusts which eventually form on the sores may take as long as forty days to drop off, leaving a horribly pitted skin. Blindness frequently results when the inflammation involves the eyes.

This is the disaster that millions of people are courting by not availing themselves of Dr. Jenner's protection. Such negligence is as criminal as leaving doors unlocked with a madman at large in the community. For Jenner's vaccine, scientifically established and universally accepted, is the specific defense against smallpox.

What is this vaccine?

It is made by inoculating a healthy calf with a previously processed virus strain. In biologic laboratories, the exudate from the resulting

sores is collected, purified, mixed with glycerin and packed in ampules. When pressed into the skin, a tiny amount of this vaccine will set up a mild infection. This stimulates the body to build protective factors called antibodies. The vaccination mark is nothing more than a deliberately created pock.

Although basic principles haven't changed since Jenner's time, methods of vaccination have. Some doctors "scarify," break, the skin. But most doctors prefer the multiple pressure method. They place a drop of vaccine an eighth of an inch in diameter on the left arm. This arm is chosen because it is less active. The point of a needle held crosswise to the arm is pressed against the skin about thirty times, making minute nicks that draw no blood. The vaccination scar resulting is no larger than a shoe button, a happy contrast to the whitish patch of skin as large as a nickel, common a decade or so ago.

When people object to even this insignificant badge of protection, vaccinations can be made on the leg. The only drawback here is that more medical attention is usually required because of the danger of contamination.

To combat the appeals of those who even today consider vaccination with hostility or alarm, doctors can present a body of convincing statistics. Prior to the United States' occupation of the Philippines, about 40,000 people died of smallpox there each year. Annually a temporary "hospital" was thrown up in Manila; a hospital from which few emerged alive. After an aggressive campaign of vaccinations, deaths dropped to nearly zero in 1909. Then the native legislature allowed the campaign to come to a standstill. Smallpox came back with a terrible vengeance. In 1918-1919 there were 50,000 deaths, 90 per cent of them among unvaccinated children under 10 years of age. The disease raged around the garrisons of vaccinated American troops, but only one soldier got the disease! After this dark visitation vaccination was resumed, and in 1925 there was only one recorded case of smallpox in the islands. That one was imported from China.

If a more immediate argument is needed, consult the incidence rate of the disease in the United States. The accompanying graph tells a dramatic story. Briefly, it shows that the 13 states with compulsory vaccination laws have less than one case per hundred thousand population each year. Those in which there is local option had six times as many cases, and those without any compulsory vaccination laws, twenty-two states, had nearly twenty-six times as many cases.

Despite these figures (and the ever present danger of a major epidemic) there exists a considerable body of persons who still oppose vaccination. Such opposition is chiefly assignable to ignorance and fear. An older generation of parents, alarmed by tales of infection resulting from the use of impure vaccine, sometimes refuse to permit their children to be vaccinated. To such a group, physicians may now give the strongest assurance that modern methods of producing vaccine and the improved technic of administering it render ill effects practically impossible.

For the much larger number who are simply indifferent to vaccination, there is a double remedy: first, enaction of uniform and compulsory vaccination laws; second, their stern enforcement by alert public health authorities. The person may choose to disregard his own well-being, but from a public health standpoint he is a focal point of a potential epidemic.

Let no one enjoy the smug assurance that the great killer either can't or won't return. Variola major struck Colorado in 1922 and left 1,086 dead; it took a minor swipe at Detroit in 1925, killing 175. The Minnesota epidemic in the winter of 1924-1925 took 505 lives. Thousands who had been exposed rushed for—and got—protection.

If vaccinated within three days of exposure, a person is safe. Hence, if one could always be sure of the time at which he was exposed, there would be little need for advance protection. But no one *can* be sure. Not more than one in a dozen victims have the vaguest notion as to where they got the disease.

But the intelligent man won't wait for legislation when he realizes that smallpox still looms as a peril which he can positively insure against by a few painless moments in the doctor's office. Infants should be vaccinated between the age of 6 months and 1 year. At this time reactions are slight. This procedure corrects the general but foolish practice of allowing a child to go unvaccinated until he enters school, thereby allowing him to pass through these highly susceptible years without protection.

For any one in doubt about his smallpox immunity, revaccination every five to ten years is the best precaution. If the vaccination does not "take," you can be reasonably sure that you are immune. But such immunity may or may not be permanent. The safest way is to try again after a five year interval. Every person needs that badge of protection on his arm which indicates that he is positively safe from what has been and may be again one of the worst scourges of humanity.

IT FLOATS THROUGH THE AIR

By RAMSAY SPILLMAN

A HAY FEVER victim sensitive to the pollen of ragweed recently described his sufferings and lamented that nothing was done to exterminate ragweed, which was a cause of similar agonies to 70,000 people in Greater New York.

That ragweed is the most ornery of vegetables is scarcely open to debate. It serves no good purpose, and I seriously doubt that if it were all exterminated, it would have any detrimental effect on the balance of nature. It is the predominant vegetation in many sections of the United States. Its pollen has been proved to travel on the wings of the wind as far as 15 miles. This pollen is produced in enormous quantity by prodigal Mother Nature, who casts billions and billions of grains of it into the air, that one grain may fall on the pistil of a female blossom. And, due to the stupendous number of pollen particles floating around, the love life of the female ragweed is seldom frustrated. But unfortunately for the human race, about 1 per cent of its constituents have noses that are sensitive to the pollen, and during the blooming season of this malignant vegetable, which is from late August until late September, they go around with streaming noses and streaming eyes and an acute conviction that the government should do something about it.

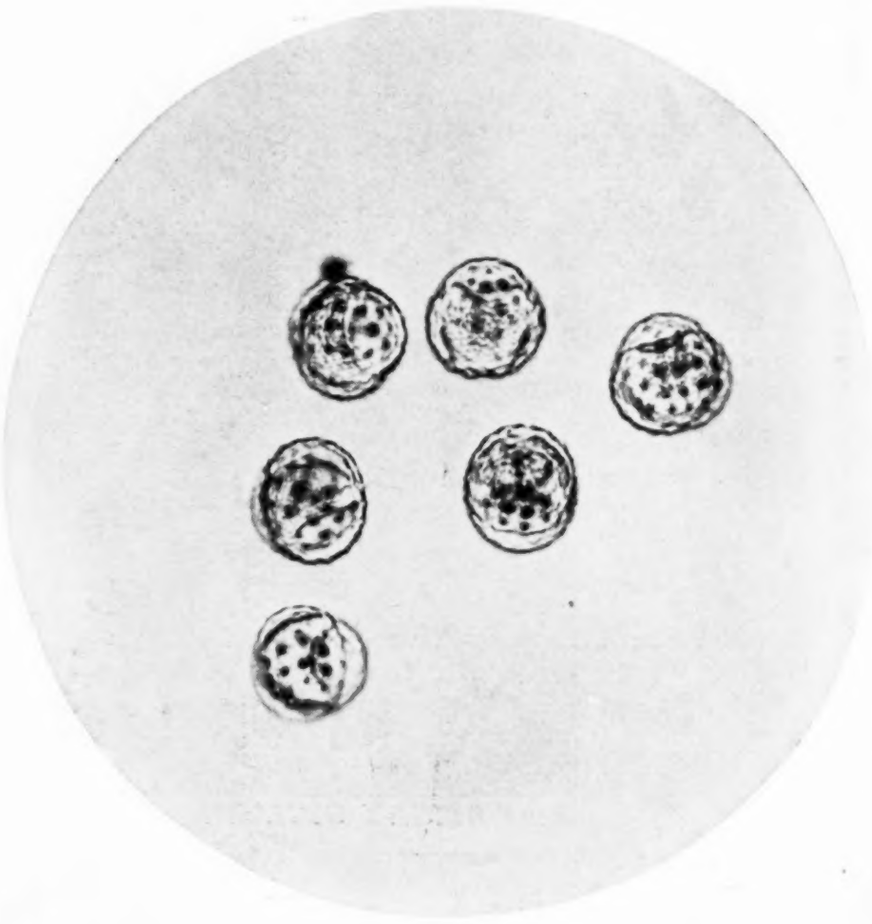
This is a situation which interests me much. I don't suffer from hay fever, but I once made something of a hobby of pulling up ragweed. I did not labor under any belief that single-handed I could rid Greater New York of all its ragweed, but I was after data on how much ragweed one individual could exterminate and also after data on private extermination versus municipal or governmental. The data thus

obtained by the only sound method, namely, the experimental, seem sufficiently important to justify their being made public.

Before going further in the discussion, let us dispose of one possible objection: If the pollen of ragweed will blow for 15 miles, even if it were possible to destroy all of it in (for example) Greater New York, what is the use? It would only blow in from Long Island and New Jersey, where there is plenty more. This objection is fallacious on two counts: Following a well known fundamental law of physics, the amount of pollen in the air decreases with the square of the distance from the source; an area of ragweed 10 miles away will be only one-hundredth the irritation that the area is 1 mile away. The other consideration is that if destruction of ragweed could be effected in Greater New York, outlying districts might catch the enthusiasm and follow suit.

Any effective effort toward the extermination of ragweed depends on three things:

1. A familiarity with the plant and its blooming and seed habits.
2. A motive to get rid of it.
3. An adequate amount of labor.



I have questioned numerous hay fever victims and find that many do not know ragweed when they see it. There are two predominant varieties, the ordinary (Ambrosia artemisiaefolia) and the giant (Ambrosia trifida). Curiously, the leaves of the two do not look much alike. The ordinary variety has a feathery leaf that has been likened to a fern; the giant has a large leaf incompletely divided into three lobes. But both produce male flowers in long drooping greenish spikes, and both produce tough seeds, not where the male flowers were, but close to the stem where branches occur.

The only intelligent means of destroying this pest is to prevent its going to seed. If it is cut down except near frost, it will quickly throw out new branches, which will bloom and form seed and thus reseed itself. If it is pulled up before it has produced viable seed, it is through. Fortunately, it is extremely easy to pull up. Even a giant ragweed as high as one's head has only shallow roots, and if the soil has been softened by a recent rain, it can be pulled up easily. But it should be pulled up when it is about a foot high; it is then large enough to grasp easily and small enough to come up with no effort.

I originally thought that if all the ragweed on a lot was pulled up, none would come up the next year because there would be no seed. I find that this is not quite correct. Enough seed carries over in the ground to give a yield of perhaps 10 per cent of the ordinary crop the next year. That means that a given area can be cleared the next year with one-tenth the labor, or better, that a given amount of labor can clear ten times the area the next year.

A block from my house there is a vacant lot covering nearly a whole city block. One year, I tried to get my neighbors who were hay fever victims to join forces with me in clearing off this block. With the exception of one neighbor whose wife was a sufferer, I received no help at all. He, his two sons and I made havoc with ragweed on several summer evenings. All that

is necessary is a firm grasp of the weed close to the ground and a pull. The following day the weed will have so dried up that it will remain permanently *hors de combat*. It is not necessary to pile up the debris; in a few days nothing is left of it.

Working about half an hour a day, with a few hours of help from this other family, I cleaned off all the visible ragweed on this huge lot, where ordinarily it forms a jungle breast high. The following year there was still a little left. The year following that there was only a scattered growth.

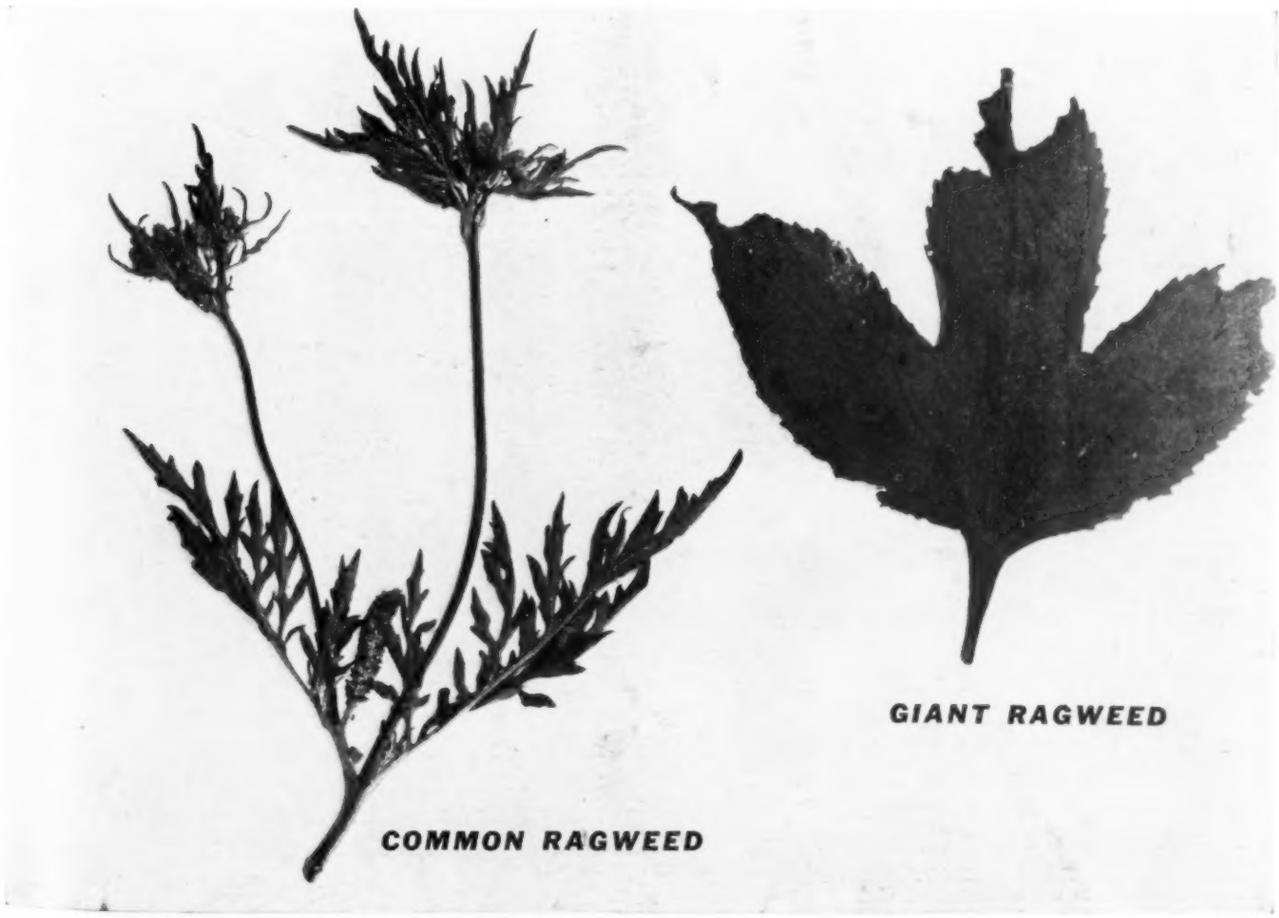
I neglected to mention that ragweed crews employed by the city of New York went over the neighborhood, to the accompaniment of a mild ballyhoo by the press, and cut down the ragweed; but as their operations took place after the blooming season, they did no good to the hay fever susceptibles; and as they took place furthermore after the weed had formed viable seed, there was no effect on the crop the following year.

Persons susceptible to the pollen of ragweed, comprising about 1 per cent of the population, cannot go near it during the blooming season; but there is a period comprising all of May, June, July and part of August when the bloom has not formed, and even susceptibles can handle the plant with impunity. Concerted and organized action by the victims themselves would prevent much of their suffering later. But it is a sheer waste of money to cut down ragweed after it has formed viable seed.

Our pioneer ancestors, with a zeal which we now regard as mistaken, had the initiative and energy to denude the Middle West of the primeval forest. But the present crop of citizens cannot even go out and pull up dinky little weeds; instead they sit down and cry because the government doesn't do something. Is there a moral to be derived from this?

The hay fever sufferers could go far toward ridding themselves of their misery, insofar as it depends on ragweed, by just a little concerted action. Perhaps the naturally destructive tendency of children could be utilized in this direction. This destructive tendency turned toward the uprooting of ragweed would not only do much to eliminate unnecessary misery but might save property that has value.

Across, at left, is a greatly magnified view of the grains of giant ragweed pollen; below are the leaves in their relative sizes—the two most frequent causes of hay fever. Their blooming season lasts from middle August throughout September.



Acme

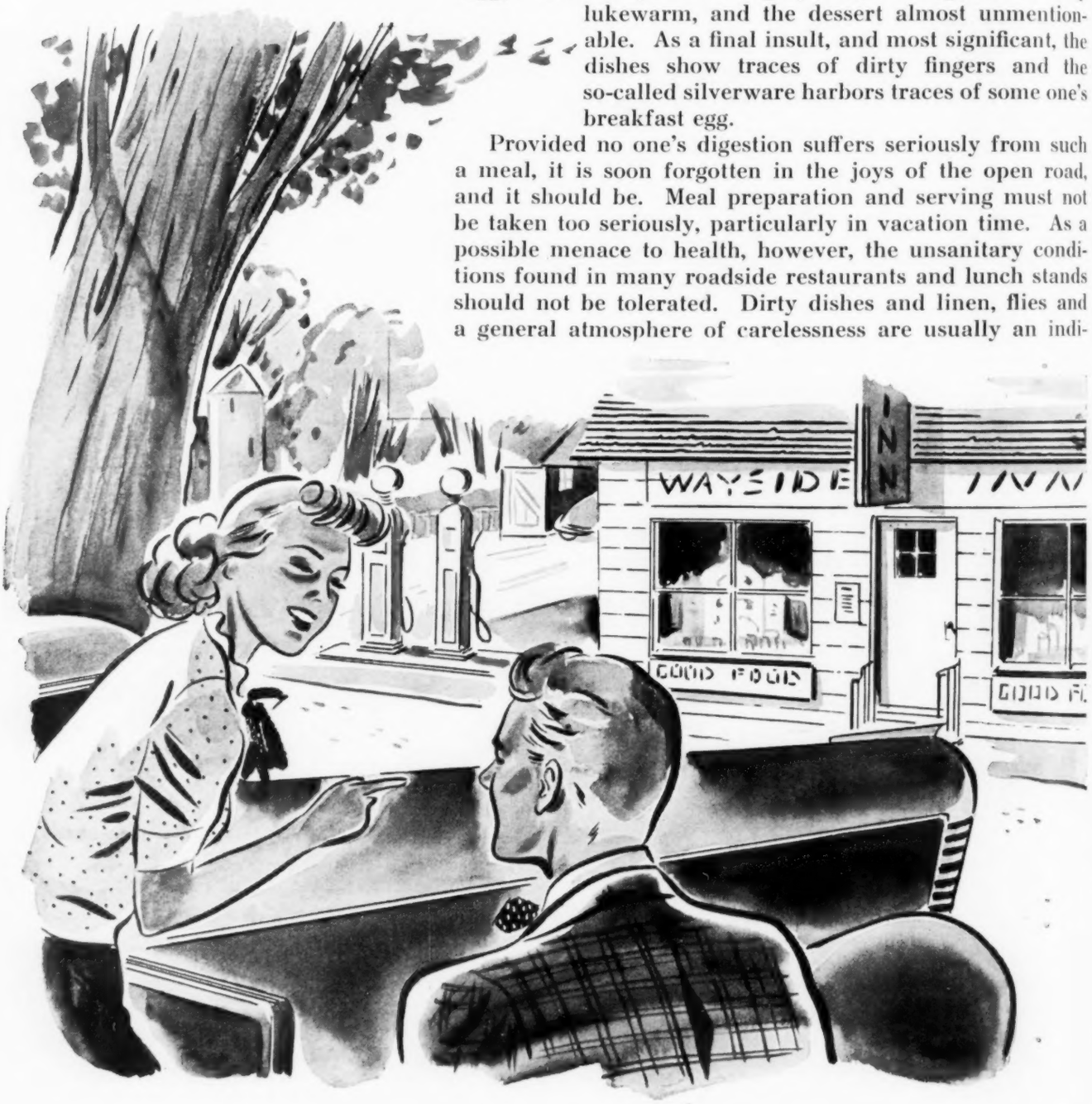
How safe is the ROADSIDE RESTAURANT?

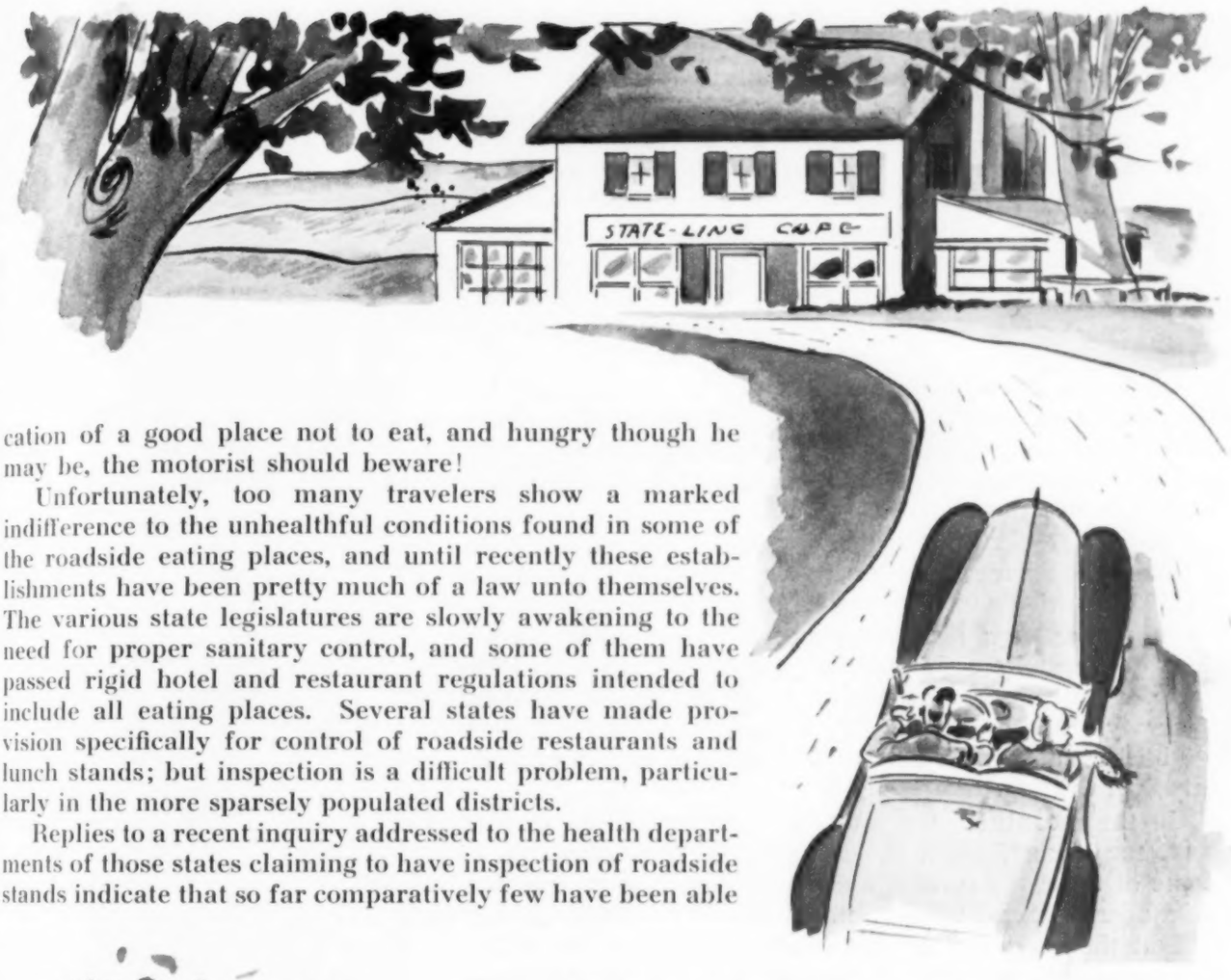
Driving along the highway, the hungry traveler sees attractive little roadstands beckoning him, tempting him to stop his journey and partake of their fare. But when he does, what does he really find?
asks JAMES E. BROWELL

STACKS of fried chicken, crisp and golden; a dish heaped with fluffy mashed potatoes, plenty of cream gravy, a crisp salad, green peas and, to complete the hungry motorist's dream, a large piece of fresh apple pie, topped with a slice of cheese.

Alas and alack! Frequently when he stops at the next roadside restaurant and "takes a chance" on the chicken, it turns out to be greasy and unappetizing; the potatoes are soggy and usually of a dull gray hue; the vegetable is only lukewarm, and the dessert almost unmentionable. As a final insult, and most significant, the dishes show traces of dirty fingers and the so-called silverware harbors traces of some one's breakfast egg.

Provided no one's digestion suffers seriously from such a meal, it is soon forgotten in the joys of the open road, and it should be. Meal preparation and serving must not be taken too seriously, particularly in vacation time. As a possible menace to health, however, the unsanitary conditions found in many roadside restaurants and lunch stands should not be tolerated. Dirty dishes and linen, flies and a general atmosphere of carelessness are usually an indi-





cation of a good place not to eat, and hungry though he may be, the motorist should beware!

Unfortunately, too many travelers show a marked indifference to the unhealthful conditions found in some of the roadside eating places, and until recently these establishments have been pretty much of a law unto themselves. The various state legislatures are slowly awakening to the need for proper sanitary control, and some of them have passed rigid hotel and restaurant regulations intended to include all eating places. Several states have made provision specifically for control of roadside restaurants and lunch stands; but inspection is a difficult problem, particularly in the more sparsely populated districts.

Replies to a recent inquiry addressed to the health departments of those states claiming to have inspection of roadside stands indicate that so far comparatively few have been able

to provide ways and means for proper inspection of roadside eating places. The situation in Texas, as described in a frank letter from an official of the state health department, is probably typical of many states. He writes:

"Due to the small appropriation allotted for inspection work in this state, we are unable to cope with the ever-increasing problem of eating establishments along highways. We have only fourteen inspectors to cover the many thousands of miles of highways in this state and there is some kind of an eating or drinking 'joint' in each mile of the highway. We have the same number of inspectors that we had before this matter became a problem. However, the work that we have been able to do along this line has revealed a surprisingly satisfactory status."

From the department of public health in Alabama comes the encouraging word that,

"This state has sixty-seven counties, all of which are provided with full-time health departments. In all but 14 of these the health department staff consists of at least a health officer, nurse, sanitation officer, and secretary. In a majority of the counties with sufficient health department personnel, the permit system became effective last October, and conditions at roadside and other eating places have been materially improved."

An official of the Division of Restaurant Hygiene, Pennsylvania State Health Department, states:

"In cities and boroughs these places are controlled by the local boards of health. This Division has jurisdiction over all these places in second-class townships, where they are inspected semi-annually by our district health officers and if conditions warrant, inspections are made more frequently. We also require physical examination for all food and drink handlers working at these establishments. This examination is made every six months and the reports are filed with this Division."

In Nevada, a bill reorganizing the state board of health has been recently adopted. The state sanitary engineer writes:

"It is our intention to submit rules and regulations for the control of eating and drinking establishments in the state within a very short time. Unless our plans meet with some obstacles, inspection should be made of all such establishments this year."

Hopeful reports were also received from New York, Missouri, Louisiana, New Jersey, Montana, Illinois, Indiana, New Hampshire and a few other states which have within recent years passed laws designed to control sanitary conditions in all public eating places. With this response to the need for control, the situation is certain to improve steadily, if slowly. Perhaps eventually in every state all roadside establishments will be obliged to display a food inspector's card, with rating.

In the meantime, the motorist will do well to inspect a bit for himself when he enters a roadside eating place. Some of these restaurants and lunch stands, of course, are so modern, attractive and immaculately clean that they delight the most fastidious traveler. In others the soiled linen and aprons, cloudy glassware, dirty dishes and presence of flies may well serve as a warning of unsanitary conditions.

Some of these restaurants and lunch stands, of course, are so modern, attractive and immaculate that they delight the most fastidious traveler.

The regulations of some states specifically mention the general cleanliness of equipment, surroundings and personnel. They also provide for screening from flies and protection from dust and other contamination, safe water supply, adequate toilet and lavatory facilities and forbid employment of persons afflicted with communicable diseases. They stipulate that dishes and other containers used in preparing or serving food must be thoroughly washed, rinsed and sterilized by boiling or immersion in a chlorine solution.

The provision that milk shall be served only in the original container is one precaution that the motorist should insist on. Furthermore, if there is not assurance that the milk is pasteurized, it should be refused. Undulant fever, which may be contracted from drinking unpasteurized milk, is now more prevalent than is generally supposed.

Any eating place which is not at least moderately clean should be avoided at all costs. It is better to "walk out," if necessary, and buy a hamburger or "hot dog" at the next clean lunch stand than to run the risk of infection. In most districts, too, the towns are not far apart, and usually they provide at least some choice of restaurants.

Some wise motorists make a practice of carrying a supply of such old reliables from the corner grocery as crackers, cheese and fruit. Such fare is often safer and more enjoyable than that found in available eating places.

Without being so "fussy" as to make himself miserable, the motorist should keep in mind that all the pleasures and benefits of a vacation can be nullified by a subsequent illness or infection, as many persons discover to their sorrow each year. Food poisoning and trichinosis are fairly common, not to mention such communicable diseases as amebic dysentery and typhoid, which are often contracted from persons in unclean roadstands.

Lunch-Counter Lament

Oh, the doom of a gal who is overweight
(And by hopes of reducing is sore deluded)
Is the fatal phrase, that I love and hate,
So subtle, so tempting, "Dessert Included."

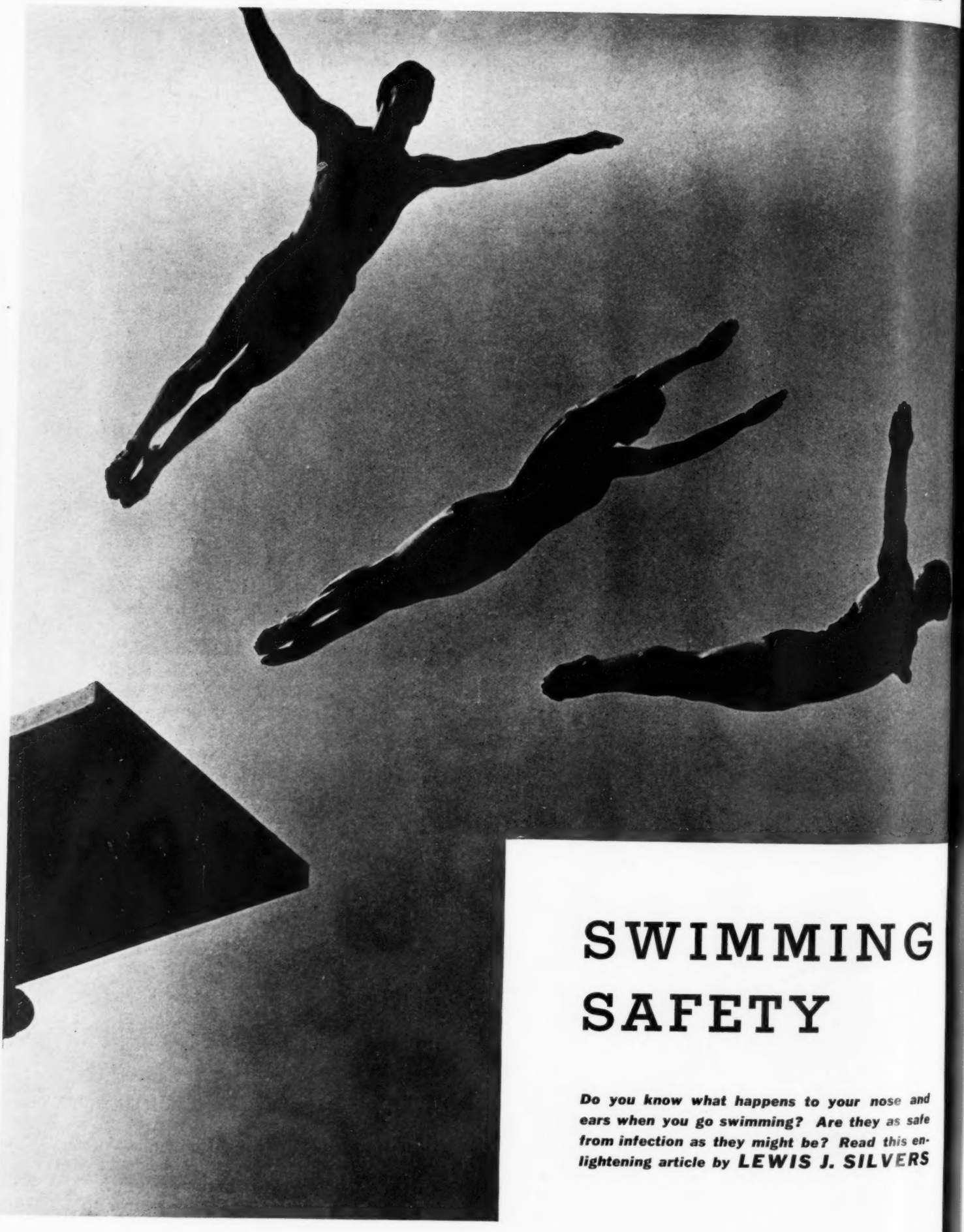
Although for the same price I can get
The vaunted luncheon of every diet—
A nice green salad and something wet—
My bargaining instincts pass right by it!

"Reducers' Specials" may woo my eye,
Guaranteed to be most slenderizing.
They don't stand a chance when a meringue pie
Offers such economical gourmandizing.

. . . .

Resolutions and oaths avail me nil
(When you're strong on curves you are weak on will);
And I'll always find myself over-fooded
As long as they offer "Dessert Included."

By WINIFRED STEWART TOWER



SWIMMING SAFETY

***Do you know what happens to your nose and ears when you go swimming? Are they as safe from infection as they might be? Read this enlightening article by* LEWIS J. SILVERS**

"LET'S go swimming." On a hot midsummer day this comes to us as a clarion call. How invigorating and refreshing is a plunge into the cool water of an upland lake or the briny surf of the sea! Few other outdoor sports are as pleasant and as beneficial to indulge in as swimming. Almost every muscle in the body is brought into play. With proper precautions as to time when indulging, length of swim as guided by physical ability and tolerance and the care of the nose and ears as here outlined, no other sport will bring greater dividends.

Children in normal health are always active and can therefore enter into summer exercise with little preparatory training. Adults, however, who lead a sedentary life all the year around cannot expect to partake of strenuous exercise in the short time allotted for a vacation. It always requires weeks of preparation for the athlete to get into proper trim for any extreme exertion. We must likewise consider training for a vacation if we expect to crowd into two weeks more exercise than we are accustomed to taking during the other ten months. While swimming is ideal for its general tonic effect, it is also a strenuous form of exercise to most persons and must be properly prepared for.

With the annual approach of the vacation season comes the admonition to beware of the hazards that accompany water sports. One is told to avoid swimming after meals, to keep out of polluted water and to avoid overexertion at all times, but especially when in deep water. But how many of us pay any attention to our ears and noses? Much suffering comes from the careless way the sensitive mucous membranes are treated when in for a swim.

To be absolutely safe from nasal and ear infection while in the water, mouth breathing is the simplest for the majority. Inhalation through the mouth and exhalation from the nose is permissible for the more expert swimmer. Nasal exhalation must be timed to occur when contact is made with the water. If plunging or diving is the mode of entering the water, nasal exhalation at the moment of contact is obligatory for safety. Never jump into the water unless the nostrils are both pinched shut either with the fingers or by a suitable nose clamp. One must always remember that the nasal passages and the throat harbor germs in perfectly healthy individuals. If the nasal mucosa is covered with its protective secretion no invasion of the deeper structures will ensue. However, prolonged bathing will wash away this normal secretion and open up avenues for infection.

Paradoxical as it may seem, the ear rarely is infected by way of the external canal or outer ear. The middle ear opens through the eustachian tube into the back of the nose, and it is here that the start of infection usually occurs. Most of our serious summer mastoid infections begin with a so-called swimmer's ear, a purulent infection of the middle ear, which, if not immediately drained, will cause infection of the mastoid bone. Inflammation of the eustachian tube with subsequent closure is the commonest cause of hearing impairment. Rarely is total deafness due to external damage of the drumhead in marathon swimmers. Salt water as found in the ocean is about 3 per cent in concentration and is more caustic on the delicate eardum than fresh lake water. A plug of lamb's wool is most helpful in keeping water out of the ear canal. Immersed in oil it will protect for many hours those who are professional long distance swimmers. If the drum has been perforated by previous disease, it is then compulsory to plug the ear canal before going in for a swim.

Just as the nose is the portal of entry for infection to the ear, it likewise is the route through which the sinuses are infected. Anatomically, the four pairs of air cavities open into the nasal passage and are contiguous with the nasal mucous membrane. Each orifice is guarded by a turbinate body or concha which in turn warms, filters and cleans the air we breathe. Under normal conditions the nose should be free to the intake and outgo of air. Any external irritant, like excessive exposure to cold water which may wash away the protective mucous secretion, will cause the delicate nasal membranes to swell. This will interfere with the ventilation of the sinuses, and obstruction to drainage is bound to follow. Neglect of continually obstructed sinuses may result in serious illness. Salt water will wash the bactericidal mucus away faster than fresh water and so must be guarded against by lessening the immersion time. It is practically impossible to avoid some irritation to the nasal mucous membrane; only by mouth breathing can repeated irritation be prevented.

The most popular of all swimming strokes is undoubtedly the American crawl stroke. Its adaptation to both speed and distance makes it imperative that properly timed mouth breathing be learned from the start. Coordinated retraction of arm and intake of air through the mouth as the head is turned up out of the water is

practiced repeatedly until mastered. If you must use your nose at all for breathing while in the water, learn to exhale through the nose when in contact with the water. For those who have had or still suffer from a sinus or ear involvement, swimming the breaststroke is safest. The head may be kept completely out of the water. By carefully avoiding nasal breathing the sinuses will remain free from the possibility of reinfection. It isn't fair to those unfortunate enough to have ear and sinus trouble to keep them from enjoying the refreshing and tonic effect of bathing outdoors in hot weather.

It is common to see youngsters start splashing water at each other as a form of amusement. This is a most vicious form of playfulness and may lead to nasal, ear or sinus infections. Sand and dirt are usually swished up with the water and aimed directly at the eyes and nose. It is often a miracle that the recipients of such treatment escape without infection.

Water splashing, dashing, plunging or diving recklessly into shallow water are practices which should be curbed at all beaches. Never dive into water that is strange to you. At the beach it is most difficult to gage the exact depth due to tidal changes every hour of the day. Many an unfortunate skull fracture has followed such recklessness.

Should you be so unfortunate as to contract an ear or sinus infection while in swimming, go to see your doctor at once. He will be able to tell you how severe the infection is and how important it is to relieve it at once if surgical attention is necessary. Remember that today we can cure many diseases in their incipiency, which if neglected become chronic and most recalcitrant to any mode of treatment. The ears in particular must never be neglected. Damage done by infection may later be irremediable, and permanent loss or impairment of hearing results. Simple procedures in the early stages of the infection could produce a complete cure. By all means get into the correct habit of consulting the expert in all matters pertaining to your bodily health. Do not listen to the advice of amateurs who may mean well and yet cause you untold damage by their hearsay treatment. "Ben-Told" has led many an individual to an early grave who could easily have been saved by proper medical attention. Only the doctor knows whether your ear needs lancing or your sinuses require draining. Chronic sinusitis or mastoid disease comes only to those who have delayed in seeking expert advice early enough to prevent extension of the infection to more vital parts. A simple nasal treatment in the acute catarrhal stage of the infection may often prevent the process from going on to the formation of pus.

Persons living in this so-called temperate climate seem to suffer the most from sinus or ear trouble. There is always a marked increase in incidence of ear involvement during the months of July and August after the lull during the spring season. Sinus disease reaches a secondary peak directly after the summer vacation season. This then is apparently due to the unsupervised, reckless form of pool or outdoor bathing. The typical diving of novices is especially productive of nasal and ear infection. The nose and the space in back of the nose are never sterile. Positive germ cultures may be obtained from these areas at any time. The organisms lie dormant waiting a favorable moment when the normal tissues may be taken off their guard. Any external irritant or excitant may render the mucosa less resistant and so become easy prey for the bacteria that are ever present.

The commonest symptoms of ear infection are a feeling of fulness and pain referable to the middle portion of the ear. Redness with bulging of the drum means acute pain due to stretching of the delicate drumhead and will only be relieved by incision and drainage of the accumulated inflammatory products.

Sinus disease may start with an ordinary head cold or a coryza due to sensitivity of the individual to some foreign protein. This extreme sensitivity is known as allergy and may be accentuated by cold water bathing. Swelling of the nasal mucous membrane results in blocking the natural secretions from the sinuses with an ensuing inflammation. Pain and local tenderness are the commonest signs of involvement of the forward or anterior group of air cavities. Swelling of the eyelids or displacement of the eyeball may follow infection of the anterior cells of the ethmoid sinus.

In summary, it is of utmost importance to breathe correctly during swimming. Mouth breathing is preferred for the novice. Only the expert who can properly time his contact with the surface of the water is permitted to exhale through the nose. Those who have sinus or ear involvement that is no longer acute may go in swimming only if they follow the precautionary measures of blocking their nasal and ear openings. Under no circumstances can water be permitted to enter the nose or ear. Only then may we eliminate much of the unnecessary suffering of those who indulge in so healthful a sport as swimming.

Sobelman Syndicate

—The Child Who Has Heart Disease

IS EXERCISE harmful to the growing child? Can it result in impairment to his heart, which may lead to future defects? Safety lies in the answer, "There are children and children."

For instance, there is Bob, healthy, vigorous and bursting with energy. Then there is Jane with rheumatic heart disease and destined for supervised exercise the rest of her life. And we have George, victim of congenital heart disease (a heart deformed before birth) and carefully limited as to exercise.

Let's begin with normal Bob. He is Any Boy you know, active, nimble-footed and uninhibited. He will get his share of exercise as he grows, naturally and under average conditions of boyhood. Parents need never worry about too little exercise for him; they may even have to restrain him from too much. The rule to maintain for such a child is exercise and rest, a normal balance between the two. Most children both in country and city take daily exercise in games, play and school activities. But as a child develops in these days of emphasis on sport and competition, he is apt to be dominated too much by the desire to be famous in the world of sports, and this is also true of girls. From 8 to 14 years, growth is rapid, and it is then that harm may occur, for the body is doing a twenty-four hour job to take care of the normal growth processes. The danger comes when in addition to this load, unusual strain and effort in competition are demanded of the growing child. Now Bob is all right. He is strong and perfect in physique. A little tough competition will not harm him. Yet, too, there is always the danger that he may be "burned out" at too early an age.

By LOUIS FAUGERES BISHOP JR.

Jane has a form of rheumatic heart disease, though she herself doesn't know about it.

H. Armstrong Roberts

Try to point out to boys, particularly, that the longest lasting fun of games is not in the immediate present but in the ability to continue participation in athletic contests when they grow up. The spotlight of fame in some particular prowess now may not be as valuable in later years as knowing how to enjoy a game throughout life. Recent years have brought popularity through childhood and maturity to the games of golf, tennis and fencing (intermittent in action), in contrast to the more strenuous sports which call for severe training and great energy, both mental and physical. The so-called "athletic heart" is generally a misnomer; it is said by most authorities that only in the rarest cases does any sport hurt the normal heart, but *competitive* sports cannot always be continued with safety.

Yet there are children and children. Bob, aged 9, is all right. He is strong and perfect physically, accustomed to rough and tumble and will probably grow up normally. But what about Jane, aged 8, with rheumatic heart disease? She has mitral stenosis, a disease in which the valves of the heart are damaged by rheumatism. The patient with this disease is

often beautiful in appearance, for she has the clear skin and shining eyes that go with this particular form of heart disease. People think she is strong because of that "peaches and cream" complexion of supposed health. But her looks are deceptive. Jane is not as fit for exercise as is some pasty-faced, straggly-haired little ragamuffin, whose heart muscle is as tough as those of her arms and legs. What shall we do with Jane? She has had rheumatic fever, but she does not know that she now has rheumatic heart disease as a result. Neither does her mother, her teacher, nor do her companions.

Today the need for periodic health examinations is almost universally recognized. Even so, every child is not examined completely enough to show up an undiscovered rheumatic heart like Jane's nor a congenital cardiac abnormality like George's, which are the most likely causes of heart trouble in children. To such youngsters athletic competition may be a real hazard to life itself. From the standpoint of heart disease, periodic health examination is important before allowing exercise of any kind for the growing child. The colleges are waking up to find that there are others beside the football hero who need safe and sane exercise. Why should this not hold true all the way down the school line, through "prep" or high school, grammar school or kindergarten? Health is no respecter of age or grades.

And always remember there are children and children!

George is 6. He was a "blue baby" and has congenital heart disease. He is equal only to extremely limited activity. You see, there are also wide variations in children with heart disease. Each girl or boy with a defective heart is an individual problem. If your child is one of these, some day show him a store with a window full of mechanical limbs or a boy who goes limping by minus a leg. Tell him, for example, that is the *visible* limp of an outward physical handicap. He has the *invisible* limp that is imposed by a defective heart. Make him see if you can that some of the world's most interesting men and women have been physically handicapped children. Point out the children hampered by egotism and selfishness, deadening to themselves and others. Let him make up in handicraft what he misses by a handicap.

Try to point out to boys that the longest lasting fun of games is not in the immediate present but in the ability to continue athletic participation when they grow older.

Acme

Perhaps the best way of all to govern the exercise of the cardiac child is to keep him "busy as a bee." You mothers will say, "But how shall I keep him busy?" Can a cardiac child go to school? Yes, if there is evidence only of chronic heart disease, whether it be congenital or valvular. If the child is suffering from any infection complicating heart disease, he should be carefully treated at home or in the hospital. It is stated that in instances where there is a high degree of strain on the heart from congenital defect, the child should be guarded from fatigue; such things as too long a walk to or from school, too many flights of stairs, too long hours should be avoided. He should also be kept away from exposure to infections, both through contact with individuals who have respiratory or other infections and from exposure to cold or wet. Ideally, a rheumatic cardiac child should go to school in a warm climate.

Guidance in activity is the slogan for the cardiac child, for of course his mind is not defective. It is up to his mother or teacher to guide him as he grows so that his "limp" will remain invisible.

Graded exercise is a solution for the growing child with heart disease. Let him exercise according to his state of health just like his mental grade in school. Often you hear of a boy or girl who "flunks out" of school or college because he can't make the grade. It is no disgrace for the child with heart disease to lose out in a certain game that is too much for him physically. Olive wreaths are often more deserved by the physically handicapped than by those who are in perfect health. It calls for more nerve "to take it" if your heart is popping out of your mouth from the palpitation of heart disease. You can help your child by watching his exercise as you do his food, his weight or his height. But don't, for his health's sake, keep your child with heart disease out of everyday living. That is like closeting him in the dark, and at maturity the glare will be too much.

And don't allow your cardiac child to be literate in mind at the cost of being illiterate in the use of his body. While normal Bob may jump the rope any number of times, Jane with her rheumatic heart may take only five jumps, and George with his congenital heart defect may take only two skips; but at least each one is jumping according to his strength, according to his *physical grade*. There are children and children: You must channel the one and coax the other.

So far as exercise is concerned, a good rule to apply to all children who have been ill with an infectious disease, which may have damaged the heart, is to make them take it easy when they are first allowed to be up. For a child with heart disease, exercise is much like a hammer: He must know how to use it, or his heart will bear the blue marks. Teach him to be a good fan, while he is getting better physically. Did you ever see a crowd of crippled children enjoy the circus? They are the most appreciative audience the clowns could wish. The New York Rotary Club has a summer camp (Camp Cheerful) for crippled boys, and you should see those boys play baseball on the sand with a rubber ball. Escape the "spoiled child" period by getting your cardiac child interested at once in something to make him forget his limitations. It was recently noted that Scouts are extending their facilities for fun to handicapped children, cardiac and otherwise. Parents can help in this movement toward sanity in exercise for young handicapped children.

How much exercise is permissible for these children with defective hearts? Some sports may be allowed even to children with heart disease, depending on the degree of cardiac impairment. This can best be judged if they are comfortable on ordinary activity. Walking, including leisurely climbing of stairs, is usually the best exercise for children, even for those with considerable heart disease. When there is only a moderate amount of heart disease, swimming may be allowed and, as they grow older, leisurely golf. When there is little heart disease, some of the more active sports, like tennis and baseball, are permitted but not under the heavy strain of severe competition. Certain strenuous sports like basketball, hockey, squash and football are wisely forbidden.

Here are a few suggestions that may serve to stimulate the cardiac child to activity: (1) If artistic, get the child an easel and camp chair for outdoor sketching; there are always models at hand in the summer; (2) present him with a small microscope which will lead him to collect and to analyze specimens; (3) buy him an encyclopedia in one volume, and the world will prove too interesting for him to miss; if in one volume, he won't have to use his arms and get tired lifting down the various volumes from the bookshelves. (4) Have a garden indoors or out; plants that grow in water are very interesting to the curious mind of a child; the roots can be seen changing from day to day. (5) Or just let him dig worms and fish!

No happier result can be reached in heart disease than the achievement of a sane point of view.

R. I. Nesmith

CAMP COUNSEL

***LAWRENCE RIGGS** gives expert advice on many aspects of camping that are often unobserved by couselors and children alike*

ORGANIZED CAMPING has in recent years developed into a major educational recreational and economic institution. In the press of competition between camps, camp advertising literature has appealed to parents and campers on the basis of the health advantages to be derived from a summer in camp. Therefore, one responsibility of directors and counselors is to see that health benefits are forthcoming from a camp experience. It is a serious responsibility to know one must preserve and develop the physical well being of a community of youngsters and their leaders.

In the past, boys and girls have returned home following a strenuous season at camp greatly in need of rest and relaxing recreation. So camps are now more generally alert to their responsibilities for genuine recreation mentally, physically, spiritually and emotionally.

Before any program of recreation can be put into effect, however, certain consideration of health should be met. For instance, since some camps are located in the mountains and many above sea level, it would be wise to consider the effect of altitude in connection with exercise.

The oxygen content of the air gets lower as the elevation gets higher. Consequently, the amount of oxygen taken by the blood is diminished. Adaptation to this effect takes place in two possible ways: The blood flow may increase in rate, or the red corpuscles, which act as oxygen carriers, may increase in number. The immediate method of adjustment is an increased heart rate. As acclimation takes place, the heart rate returns nearly to normal. But the red corpuscles of the blood are increased in number.

There is an initial rise in number of corpuscles during the first two or three days, which is due to the fact that the reserve supply is called into use; but the more complete adjustment does not take place for a period of from three days to several weeks, depending on the altitude and the amount of activity in which the individual participates.

This increased heart rate requires several days to reach its maximum. The pulse rate returns to its resting level slower in high altitudes during the first days and probably indicates a greater strain on the heart. The speed with which the heart rate returns to normal can be increased by training, however.

Significant changes in respiration and heart action do not normally take place until an altitude of from 3,000 to 4,000 feet is reached. However, at the elevation of 1,000 feet there is about a 4 per cent increase in oxygen capacity of the blood by an acclimatized person over his capacity at sea level.

More oxygen is required by the cells of the body during exercise. In part this is normally compensated for by an increase in red blood cells and therefore an increase in the oxygen carrying capacity of the blood per unit of volume. While there is this partial compensation, there is also an increase in the respiratory rate and therefore in the speed of the heart action.

The pulse rate stays at an accelerated frequency longer after exercise involving endurance than after exercise involving speed or strength.

In view of these facts, it is easier to understand that by the mere act of going from a lower elevation to that of, say, 4,500 feet, where many western camps are located, will bring about physiologic changes that require a few days for complete adjustment. If during this time strenuous activity is also added, there is apt to be an unusually severe strain on the hearts of growing youngsters, which may not necessarily injure the heart but which may produce ill effects by lowering their vitality and thus cause illness. This is especially true if we take into consideration the fact that there is also a readjustment going on in relation to a change in water, food and the routines of life generally.

The first few days of camp should provide the usual first thrills from camping out or from just being in camp; but there should be no strenuous endurance activities, such as long, hard hikes or strenuous competitive athletics. Some camps are in the habit of introducing a youngster to camp life by taking him on a particularly hard (though short) hike or by setting

entirely too fast a pace in regard to physical activities. Once set, this fast pace naturally becomes hard to keep up and often results in the impression that things are not going so well in camp when the pace slows down. Better to make a peppy, though more leisurely, start until the group has been able to become more adjusted and acclimated; then go on with the harder things in their proper places.

During the first three days of camp, the director, the counselors and the camp medical staff will be able to save later fatigue and possible illness by their watchfulness for overexciting activities on the part of those who cannot bear up. There is a tendency to regard the first few days in camp as being the one time, if any, that medical services will probably not be called into use and that there seems to be the least need for being alert as to symptoms of illness. This is because in the past there has been so much attention given to getting under way that camps have waited until something actually appeared before taking action. During the first three days of camp there is an increase of almost 50 per cent over the next seven days of illnesses in camps. So a bit of early preventive medicine might save many a camper from losing out on activities later.

It has been my experience over a long period of years in camps both as a counselor and as a director that the nervous energy in the first three days shows up in a slump along about the fourth day unless care has been taken to ease into activities.

Because overdoing physically causes strain and fatigue—especially with growing youngsters—there should be no emphasis on endurance and long exertion under difficult circumstances. This is especially true in the cases of adolescent youngsters who are apt to keep going to the detriment of their health, merely so as not to appear as "softies."

H. Armstrong Roberts

The first few days at camp should not provide for strenuous activity, such as long or difficult hikes. The campers should be given a chance to ease into their new environment, to become acclimated to it.

This means that there can be no virtue in the running-up-a-mountain type of hike that makes a fetish of being able to keep up with expert counselor hikers who are out for records. Send them out alone if they must make such records while in camp; but the health and vitality of campers must not be sacrificed at this false shrine!

Hard hikes that are fatiguing have a real place in camping experience and an educational place at that; but they must not become endurance or speed tests out of all proportion to the ability of the youngsters making the hikes. Discrimination and alertness on the part of those conducting the hikes must be the rule.

One director over a period of years has developed a standard of judgment on distance of hikes as follows: Boys under 12 should not hike more miles in a day than the number of years they are old, minus two. Boys between 12 and 15 (and some between 15 and 17) should not hike more miles in a day than they are years old.

Of course this is a generalization that cannot always be applied to every case, but it is a basis for thinking that has worked out to advantage in this camp, where hiking is done at elevations ranging from 4,500 to 7,500 feet. Even this, under some circumstances, is a strenuous program and must be adjusted to the difficulty of the territory covered and to the individuals doing the hiking. This gage is given for a hike of medium or little difficulty.

Realizing that there is at first an especially slower return to normal of heart and respiratory actions in these higher altitudes, ample relaxation must be provided in the form of rest periods. Encourage a nap then, if possible.

Rest periods should be continued after the period of acclimation to make up somewhat for the extra physical and mental demands of camp life.

In camp where so much energy is expended—more than in the usual routine of life—sleep and rest becomes most important to the maintenance and development of health. Indeed, it would seem for some persons at least that more sleep and rest than usually required would be necessary.

There is a wide difference of opinion as to what constitutes adequate sleep for any given age. It seems that the best one can do is to make liberal allowance for individual differences and judge on the degree of recuperation after sleeping as to whether or not the sleep has been adequate in quality and amount. General standards are helpful as guides, however. Williams suggests the following table of standards.

Age	Night Time	Afternoon Nap or Rest	Total Hours
4- 6 6	or 7 p.m.-7 a.m.	1 hour	13 or 14
6- 8 7	or 8 -7	1 hour	12 or 13
8-10 ..... 7:30	or 8 -7	½ hour	11½ or 12
10-12 8	or 8:30 -7	½ hour	11 or 11½
12-14 ..... 8:30	or 9 -7		10 or 10½
14-16 9	or 9:30 -7		9½ or 10
16-18 ..... 9:30	or 10 -7		9 or 9½
Over 18 10	or 11 -7		8 or 9

In sleep, all the activities of the organism are somewhat slowed down. In the process of awakening, widespread readjustments take place throughout the organism. Because of inadequate time for adjustment, a person should not be abruptly and sharply awakened. The organism cannot receive and correlate the stimuli thus presented in such a way as to make an adequate total response in the time allotted.

The following considerations must be taken into account regarding the amount and quality of sleep actually accomplished in camps:

1. Children have to get used to sleeping outdoors, as indeed we all do, under strange and sometimes relatively uncomfortable conditions. Sleep is not apt to be adequate until this adjustment is made; it may take from one to three or four nights.

2. The sunlight or the heat of the sun's rays in the early morning hours often disturbs sleep that otherwise would continue.

3. On overnight trips it is common for the inexperienced to get less sleep than they ordinarily do.

4. Sleeping time allotted and the amount of sleep actually gained may be totally different things. Noisy cabin groups or a general stir through the camp contributes greatly to lessen the campers' sleep.

In summarizing the points I have made, these implications stand out:

Allow ample time for getting to bed after the last activity of the evening by enforcing quiet after taps. Quiet music played or whistled after the blowing of taps is often conducive to prompt quieting. The no-talking-after-taps rule should be strictly observed and matched by a no-noise-before-first-call tradition. To establish these as traditions, "things we do," helps greatly in their continued observance.

A rest hour following the midday meal should be regularly and quietly observed. On special days and on hikes, a like period of rest should be observed. Here again tradition plays an important part, as does the example set by the counselors themselves. Counselors should be in their cabins with their group at this hour. Meetings should not be planned during this time for any one.

It is suggested that to do away with the difficulty sometimes experienced about getting from the camp store to rest *(Continued on page 671)*

The Psychology of Loafing

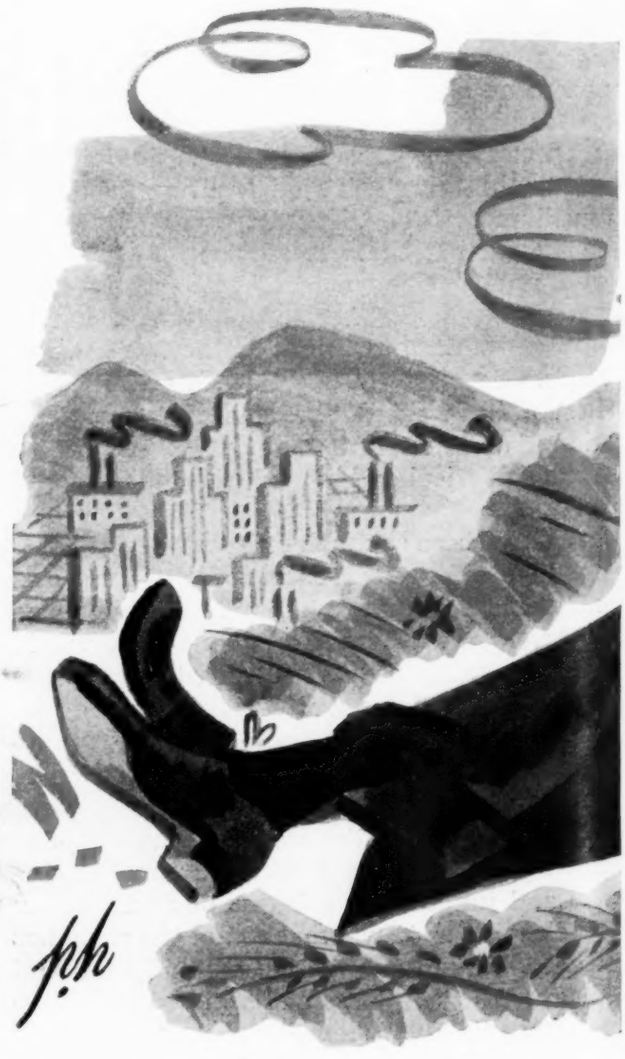
An expert at doing—nothing! Yet he who can loaf can have the world at his feet, declares **KENNETH P. WOOD**

THE hardest thing in this world to do is nothing. Few people know how. Books and magazines are published on the psychology of advertising, of body building, of novel writing, of medicine and finance—of a hundred different activities. But nobody instructs one on the psychology of doing nothing. Perhaps doing nothing is too difficult and paradoxical an art to teach.

Why paradoxical? Because to do nothing successfully one's mind must be keenly alive, a storehouse of associated ideas, a purring dynamo of suggestions. The man who has done the most things in his life is the best equipped to do nothing; the man who has done only one thing is the worst. This is plainly illustrated by the average "tired business man" on a vacation. If you meet two brokers "resting" on the boardwalk at Atlantic City, ten to one they are talking stocks. If you meet a typical business man in the second week of his holiday, the odds are with you that he is bored to misery—restless, unhappy, secretly yearning to be back at his work. He is so accustomed by long habit to do one thing that he doesn't know how to do nothing. He has so long trained his mind to respond only to the stimulus of business that its sensitiveness has been destroyed; and when the habitual stimulus is withdrawn, the thousand little stimuli of the outer world, the natural world—from bird calls in the meadow to golf and books and pleasant chat and hours of idle meditation—come knocking at his brain and are not heard. His mind becomes a blank. He is bored, unhappy. He is totally incapable of doing nothing, just because he does not know how to do enough things.

The saddest thing I ever witnessed took place a year ago. Every day on my way home I used to pass a little chop house, where in back of a short bar by the window a gray-haired man always stood, opening oysters. Early or late, he was always there, with rough, scarred hands, opening endless piles of bivalves. Wednesday, apparently, was his day off, and as I drew near I noticed him standing on the sidewalk, dressed stiffly, uncomfortably, in his best clothes and looking mournfully through the window at his substitute behind the pile of shells. He was the picture of miserable aimlessness, of the man who has something on his hands which he doesn't know what to do with. It was Time. And we all know how heavy that can hang on our hands.

I was so impressed that the next day I walked past the place solely to see if he were back on the job. He was. And clad once more in soiled apron, his sleeves rolled up, a look of complete contentment and satisfaction on his face—opening oysters. To me it was a tragedy, the tragedy of a man who didn't know how to loaf.



To loaf is a much abused verb. Usually, as we employ it, it means to shirk. Nearly everybody knows how to shirk. But real loafing is a fine art. Genuine loafing is the happy employment of time that is legitimately yours. And rare indeed is the man who is skilled in it. Real loafing is not doing something else because you have nothing to do and doing it without the uncomfortable feeling of "wasting time," without a nervous itch in your fingers, an impatient fidgeting of the body, a feeling of "Oh-dear-I-wish-something-would-happen." And skill in such loafing is only acquired by storing the brain with fancies, with a multitude of interests in the small things of the outer world, by possessing a sensitiveness to impressions however fleeting, a power of reflection and quiet thought.

Walt Whitman once said he liked "to loaf and invite the soul." That implies that you must have a soul.

To begin with the less important, consider the man who waits for another man, for a train or for a woman—newspaper reporters, traveling salesmen and husbands afford excellent examples, respectively. If the reporter has another assignment and is "on space," his impatience may readily be forgiven. If the traveling man has another connection to make, an appointment to keep at the other end of the line, so may his. Husbands may be forgiven much, always; and possibly the curtain rises at 8: 15, and it is now 8: 10.

But suppose, as is often the case, that in none of these instances is there crying need for haste. Suppose the reporter has no other assignments; the salesman will reach his destination in plenty of time, though the train be later than it is; the husband doesn't want to see the first act anyhow. How much happier each man will be, how much more cheerful and likely to digest his dinner, if he knows how to do nothing gracefully, if in his enforced idleness he knows how to loaf.

The salesman sits in the outer office. Other callers come and go. Clerks rush in and out. A telephone operator chatters incessantly to "Marge," somewhere at the other end of the

wire. The office boy gives object lessons in the art of being impolite. A hundred little sights and sounds clamor for the waiting man's attention. Each one of them means something; each one of them is significant of character, or can start some train of suggestion which may lead to speculation on the economic system of the country, the cost of living, woman's vanity, fireproof construction, the European situation or the immortality of the soul.

It all depends on the salesman, on how receptive his mind is, how much natural curiosity he has, how many interests in life which can connect themselves with what he sees about him. The most active salesman probably has the most curiosity and the greatest storehouse of associated ideas. He will make the best loafer. The poor salesman will sit his hour in the outer office, kicking and swearing and losing his patience and temper. The good salesman will go in finally to the man he came to see, smiling, cheerful, much more likely to get the order and with a few added impressions of this panorama we call life tucked away in his brain. That is because he knows how to loaf.

There is a true story of two little girls, who, through some mistake, arrived at a country railroad station some hours before there was anybody on hand to meet them. When they were finally called for, they were asked, "Didn't you have a dreadfully dull time waiting so long?"

"Oh, no," was the reply. "There were lots of things to do!"

"What did you do?"

"Well," they said, "we walked on the tracks, and then we played going to Europe in the baggage room, and then we made funny faces in the bright Yale locks."

Here is true loafing for you. Not the loafing of the philosopher, to be sure, who sits still and takes in impressions to cogitate on them, but the loafing of little children, whose brains and fancies are so full of ideas that play can be derived out of anything—even a Yale lock—and so time never hangs heavy. Not having formed habits, the child doesn't need the habitual thing to stimulate it. Never having worked, it has not forgotten how to play. Never having done anything, it is serenely happy doing nothing.

Once upon a time, two little girls had to wait several hours in a country station for some one to come and get them. Did they have a dull time? "Oh, no!" they chorused. "There were lots of things to do! We even played going to Europe in the baggage room!"

This apparently was his day off. He was standing on the sidewalk, dressed stiffly and looking mournfully through the window at his substitute behind the pile of oyster shells. He was the picture of miserable aimlessness, of a man who has time on his hands and doesn't know how to loaf!

Perhaps, for most of us, a vacation is like the Kingdom of Heaven: We have to become as little children to enter therein.

Again speaking in parables: Man is like unto a potato field. He needs to lie fallow now and then, to fertilize the soil. Great deeds may make a noise in the world; but that is only because a great force strikes an obstruction in its path and overthrows it. Great deeds are born in silence and meditation. The stillness of a philosopher, a poet, a statesman is the stillness of the spinning top.

You are out in the world, doing your little deeds, making your little noise, crying your little philosophy of "action." The other fellow is so still that his stillness is deceptive. You assume that because he is doing nothing, therefore he is uselessly employed. But this is not always true. For behind that stillness the thoughts are germinating, the butterfly fancies assembling in the dim cocoon of his brain, the power for great deeds is slowly accumulating, to be launched at last and accomplish more than you, who never learned to loaf, dare dream of.

One of the numerous falsities that children were recently compelled to copy in their "memory gems" book in school is that stanza (I quote from memory):

> True worth is in being, not seeming—
> In doing each day that goes by
> Some little good, not in dreaming
> Of great things to do by and by.

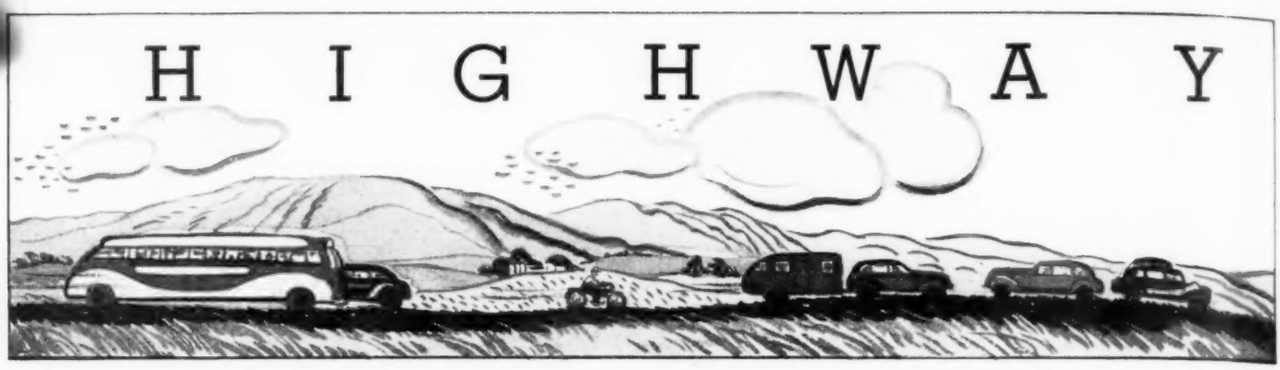
That is excellent doctrine for plodders. But there never was a great deed yet that wasn't dreamed of long before, in what the world calls "wasted hours."

Force itself is naturally silent. The hurricane that roars when it is opposed by the trees on land or the ship's rigging on the sea, sweeps noiselessly through the upper spaces, where there is nothing in its path. And the renewing sunshine after the thunderstorm makes no sound. "Silence came before creation, and the heavens were spread without a word."

"All great things," said a wise philosopher, "are born of silence."

We have heard much in late years about the "strenuous life." It sounds well. Perhaps, for some of us who could never learn to loaf, only shirk, who would rust *(Continued on page 647)*

H I G H W A Y



RESTLESS America! Ever on the highway. Bicycles, motorcycles, automobiles, trailers. Heeding man-made traffic signals lest the law should curtail pleasure.

Thoughtless America! Taking health for granted. Utterly ignoring nature's signals. Blithely disregarding laws of nature and the fact that they may limit pleasure too.

Foolish America! Having the engine examined, the chassis relieved of all squeaks, the tires carefully tested, and yet starting off on a cross country jaunt without knowing the condition of the internal workings of the restless human riders of the highway.

One can leave the conveyance, if it needs to be repaired, and travel on in some other way. One can exchange the original object on wheels for another. But the human machine one cannot leave behind him. When the body needs overhauling, its owner must stay with it. Nor can he "trade it in" on a better one.

What, then, can a person do to assure no highway disaster due to development of ill health while en route? First of all he should make a sensible preparation for the journey. Have each person who is planning to participate visit a doctor for a thorough physical check-up. The best possible kind of a bill to carry on a trip is an absolutely clean bill of health.

If this cannot be obtained due to temporary or permanent disability, should one be obliged to stay at home? No, knowledge is power. If a doctor tells a would-be traveler that he has certain physical limitations, then the traveler is armed with this knowledge, which is power. He can plan his days to meet his special needs. He can live within required limitations.

Specific examples, for instance, may be an elderly person with high blood pressure; a man or a woman who has been working under a severe nervous strain; a baby but a few months old; each will have his own particular limitations. Only the family physician can tell how best to live within them. His advice should be considered at least as essential to a safe and happy journey as are road maps and information about detours and first class hotels.

Detours and good hotels, though, do play their roles in highway health. Unless one is a husky college freshman on whom a second-or-third-hand "flivver" that bumps springless over stones has no effect and who can substitute hot dogs at a roadstand for well balanced meals without suffering an intestinal upset, it is well to know before one starts on a journey which roads are in good repair and where wholesome meals may be purchased.

As essential as food is slumber. Small, hot and poorly ventilated rooms are always enervating. One needs sound, restful sleep as preparation for the continuation of the trip the following day.

If the elderly folk and small babies are being left at home, highway health may be sought and found in a trailer. A modern, well equipped, well tended trailer may provide an extremely healthful highway home. Indeed there are those who have taken along the baby and traveled by trailer from coast to coast with no ill effects for any member of the family. But unless a trailer is selected with care and receives proper attention day by day, it can become a public health menace.

Odd it is how many people seem to think that sanitation may be safely disregarded once they leave the city limits. It must be the same type of unreasonable reasoning that prompts a woman who is "reducing" to eat sweets when no one is around, while denying herself in the presence of others. Or it may be that a person has so long relied on city sanitation that no thought is given to its lack when away from home.

Whatever may be the cause, the fact remains that travelers must be frequently reminded of the dangers of unguarded means of sewage disposal and of unprotected waters. Germ-laden water used for washing salad greens may cause infection even though the water is not actually used to quench thirst.

HEALTH

By BEULAH FRANCE

A picturesque roadside well with *ye olde oaken bucket*; a hand pump which "works, so must be quite all right"; a cool, sparkling spring, "clear as crystal"—none of these may provide water that is safe to drink or even to wash food in if it is to be eaten raw.

The old-fashioned ideas that running water is always pure and that polluted water purifies itself by traveling a certain distance are hygienic fallacies. Even tap water in a washroom may not be that with which local citizens choose to quench their thirst. It is best to ask first and partake after asking. If one is not certain of the source of drinking water it should *always* be boiled first for fully 10 minutes. And this precaution may well be taken with water in which dishes and silver used along the highway are washed.

Freezing temperatures do not always kill all germs. Ice made from contaminated water has occasionally been the cause of illness. It is therefore safer, for the sake of highway health, to drink water which has been cooled in some way other than through the direct addition of ice.

Why all this fuss about water? The answer is easy. When any water "which was wet" was freely taken without qualms or queries by

A vacation on wheels can and should be a health restorer. However, there are a few simple precautions that all travelers should observe for their own safety.

Ewing Galloway

highway travelers, water-borne diseases were accepted as "the will of God." Since sanitary supplies of water have been insisted on more and more, and have been more and more universally provided, the incidence of these water-borne diseases has been drastically reduced. After all, how can one hope to know what the preceding picnic party did to pollute the stream or spring which now looks so innocently inviting? There are too many highway robbers of health for one to take any chances.

Of course such risks are always reduced by typhoid inoculations taken before the trip began. Such a form of protection was most likely included in the physical check-up. But—there are dangers from polluted waters other than typhoid, and so—why not play safe?

Nor are water and ice the only sources of danger to be avoided. Milk also may carry disease germs. When food supplies are taken on the trip, in the trailer or automobile, evaporated milk may safely be included. It is sterile; it will not spoil until after the can has been opened. It can be made the equivalent of fresh milk by dilution with water which has been sterilized by boiling. If it is necessary to purchase unpasteurized milk, it should always be boiled before use.

Exactly the same precautions as those taken in a stationary kitchen should also be taken in the kitchen that is mounted on wheels. If meals are cooked in a trailer or if food supplies are carried and prepared along the road, one must bear in mind the possibility of food poisoning from food that has been kept too long. This means that great care must be taken in the selections made at unknown markets, and the care of supplies between the time they are purchased and eaten must be strict.

Nature too plays her tricks now and then. The traveler must remember that edible mushrooms and poisonous ones are so much alike that the only safe place to pick mushrooms is in the store window.

When starting off on a journey a supply of food already prepared is generally put into the car and eaten by the wayside. Its preparation should include careful wrapping so that dust, dirt and insects can obtain no access to it. Before it is unwrapped and eaten the hands of the travelers should be carefully washed and dried.

When food has not been brought from home, when it is not prepared in the trailer or by the roadside but is purchased en route, there are other precautions to be taken. Ready made sandwiches should be well wrapped in waxed paper. Cake, pie and such should be kept in glass compartments—which are *not shared by flies!* For filthy flies may easily be "winged messengers of death." Their germ-laden feet may carry unspeakable refuse, which they freely deposit wherever they chance to light.

Mosquitoes too may cause considerable unhappiness on a vacation. In choosing a camping site it is important that one makes certain there are no mosquito breeding places in the vicinity. Marshy lands, ponds in wooded sections and stagnant pools are all to be avoided.

Flies and mosquitoes are particularly dangerous to the highway health of babies. An infant cannot 'swat' a fly! He cannot kill a mosquito! He is dependant on adults for protection. When a baby takes to the highway—or rather when he is taken—he should have the assurance of freedom from all highway pests. While riding in the car during the day, he should be surrounded with clean mosquito netting, kept at a respectful distance from his face. When evening falls he should be put to sleep in some quiet, secure place, in a hotel for instance, in a folding screened-in crib, which has been brought along for this purpose. Such a crib assures safety from animals, bugs and everything else that cannot pass through very fine wire screening. It is quickly unfolded and set up either indoors or out.

Outdoors? That smacks of camping! Babies do not belong in camp life! But now and then they find themselves there. Whenever an infant travels, which should really be as seldom as possible, whatever equipment is needed for his perfect health and comfort must be taken with him. These include a folding bath tub and all bathing accessories; a portable toilet seat, so that health habits will not be neglected; throw-away diapers for the baby not yet fully "trained"; apparatus for sterilizing all utensils used for feedings; sterilized milk, fruits, cereals and vegetables in glasses or in cans; his favorite toys, and plenty of changes of clothing.

But camp life for adults may be restful and healthful. If a tourist camp is chosen, it must meet certain definite standards of health. The location must provide not only safe and adequate drainage, but its facilities for sewage disposal and its supply of drinking water must have the approval of the local or the state board of health. Garbage and refuse must be either burned or buried.

A vacation on wheels can and should be a health restorer. All too often, however, its aftermath is a physical "let-down" or even a period of serious illness. It will not be either of these if travelers will only observe the simple rules of hygiene which assure highway health.

A simple device for catching all the rain drops that fall on a plant is shown in the way its leaves grow around its stem. Note the tiny cups that are formed there in this specimen.

PLENTY of DROPS to DRINK

By MARY GEISLER PHILLIPS

"USE WATER externally, internally and eternally," is the advice of dietitians, and every one takes that advice on hot days or after strenuous exercise that has produced sweating. But that is not enough; at all times the need for water is great, and if that need is not met, life cannot be sustained more than a few days.

Shipwrecked sailors, cast away without food, never give up as long as the water supply is not gone, for they know that water alone will keep them alive for several weeks. Wars are certain to be lost if the enemy can cut off the water supply. All the great centers of civilization in the past were established near or on a body of water, and today huge sums are spent bringing water to cities from sources hundreds of miles away.

Why is it that water is second in importance in the three vital needs of the body—oxygen, water, food? It is because about two thirds of the adult body is water, held within the billions of cells of which the body is composed. Water is the largest constituent of every soft tissue, and even hard bone cells are more than one-third water. Other reasons for the eternal thirst we have in common with animals and plants are these: Every cell in the body must be constantly bathed in fluid to do its work well; moving parts of the body must be lubricated; food taken into the body must be dissolved in the process of digestion; digested food must be carried in a fluid medium to all parts of the body; waste products must be flushed out, and the lungs and skin cannot perform their work unless they are moist. All these things take great quantities of water.

Plants also are largely made up of water, and they too require large amounts circulating constantly from root to stem, from stem to leaf. It is said that a beech tree of medium size uses about sixty-five gallons of water a day and an oak tree much more. Of course, animals and plants that live in water do not have to worry about their source of supply, except in times of severe drought; but land plants and animals have a harder time. Animals have a great advantage: If the water gives out in one spot, they can move to another. Plants rooted in the ground are worst off, for all they can do is to conserve any moisture that happens to come to the bit of earth they occupy. But this they do in many clever ways and manage to survive even though they may be miles from the nearest river or lake.

Some plants have their leaves and branches so arranged that rain will drip from them to the ground right where it will do the most good. If

you stand under a tree during a shower, you keep comparatively dry; but there will be little streams dripping from the border of the foliage, soaking the ground in a wide circle. If you dig in the circle where the earth is the wettest, there you will find an abundant mass of delicate, branched rootlets. The tree has covered its leaves with a waxy skin from which rain runs easily and then has arranged its leaves one above another so that the drops of water run from the top leaves to the surface of those below which are a little nearer the border.

Another device for utilizing all the rain that falls on a plant is shown in the way the leaves of a plant grow in relation to the kind of root that plant has. Vegetables in a grocery store take on new interest when viewed as rain gatherers! Rhubarb leaves, for example, do not allow rain to drip off the tips of their large leaves; but instead, the leaves catch every drop that comes to their broad expanse, let it run down the deep veins to the center and then pour it like a funnel toward the stem, down which it flows to wet the ground close to the plant. That is where this plant needs it most, for the root is long and tapering, with few side rootlets. It looks as if plants knew the principles of mechanics.

Onion leaves are wonderful collectors of water, being built like troughs down which water may run to the stem to be poured right on the bulb. Carrots and beets also direct rain toward the stem to water the root directly beneath. It becomes an easy matter to tell what kind of a root a plant has by looking at the way the leaves and stems are placed. The hairy leaves of potato and tomato plants let the water roll off their tips to wet the ground some distance from the central stem, where branch roots are spread underneath.

Some plants go even further in their devices for conserving moisture. The inventive ash has the stems of its leaves so deeply grooved that they form tubes in which water stays for several days bathing the delicate absorptive cells on their inner surface. The aspen leaf carries at the point where the leaf joins the stem two tiny cups, the bottoms covered with cells that will readily take up water. In dry weather these cells are covered with a resinous substance, but after a rain, the little cups hold moisture for a long time.

The next time you see teazel growing by the roadside, you will discover that the rough textured leaves grow slanting in pairs on opposite sides of the stem, one pair facing north and south, the next pair above or below, facing east and west. No pair, you see, interferes with rain reaching another pair. Because of their hairy surface, the water falling on the leaves rolls toward the central stem. And there at the junction of leaves and stem, the two leaves join to form a sizable basin. Several days after a rain, these cups will still be full of water, which is gradually absorbed. The teazel has developed good rain barrels.

The human body has developed no such marvelous device for catching and holding water. The best the animal kingdom has to display is the camel, which carries around enough water to see it across the desert. Humans have resorted to rain barrels, wells, reservoirs and dams. The old Roman aqueducts show in that early day how water was piped to large communities so that the supply would be adequate and always fresh. Today, man and animals and plants may flourish in the once arid portions of America, which are being turned into a land of lakes and rivers by the diversion of plentiful streams many miles away.

Man must frequently renew his own supply of water because his body is constantly utilizing what has been taken in. There is a continual loss of water through the pores of the skin; for instance, exercise produces moisture from the sweat glands. Then each time we exhale air from the lungs, some water is carried with it; this may be seen as drops of moisture forming from the hot breath as it is blown on cold window panes. And water is eliminated as urine from the kidneys and in the feces from the alimentary canal. An adult loses from four to five pints of water daily.

Water in circulation through the body is one of the conditions of good health, and this need is supplied in several ways: (1) water drunk as a beverage, as water or in other liquids, such as milk, cocoa, soups or fruit juices; (2) water taken in with solid foods, particularly fruits and vegetables. Even the driest cracker contains some liquid. The water content of a few common foods is as follows: lettuce, from 86 to 95 per cent water; apples, 76 to 86 per cent; potatoes, 81 per cent; fresh lean beef, 54 to 70 per cent; white bread, 26 to 49 per cent, and cheese, between 36 and 72 per cent. (3) Water may be formed in the body as a result of the digestion and utilization of food.

One important function of water in the body is to keep the temperature of the body always the same. When the outside air is cold, little evaporation or sweating from the surface of the skin takes place; but when the temperature of the surrounding air is higher than normal body temperature, water evaporation is needed to remove the excess heat. In hot dry atmos-

pheres, the amount of water lost by evaporation is enormous; but when the air is cold, not only does sweating stop, but less water is brought near the surface of the body where it would be cooled, so that body heat is actually conserved in this manner.

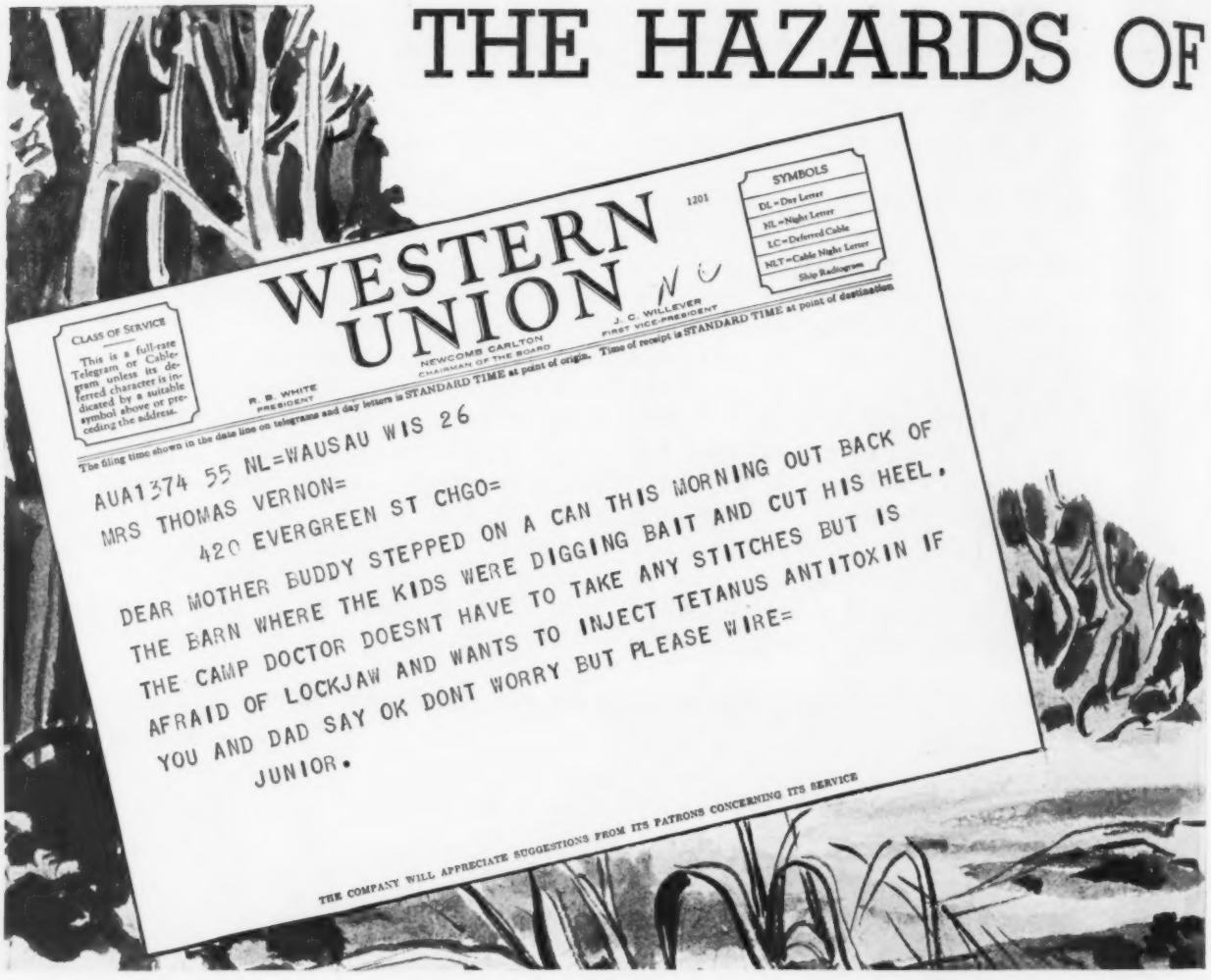
Since water is so important to man's well-being, he should insure himself of a plentiful supply. Noted chemists say, "Stated in more practical terms, the average person probably needs from six to eight glasses of water, taken as such and in beverages, daily." A good plan therefore is to drink a glass of water every morning on rising, for once that habit is established, the body is assured of a good start for the day. Dietitians do not frown as they once did on drinking water during meals, although they warn against using it for washing down food. Perspiration eliminates salt as well as water, which must be replaced, especially when perspiration is copious. Salt tablets or table salt, equal to ¼ teaspoonful once or twice a day is sufficient.

John B. Gough used to give his famous toast to water thus: "No poison bubbles on its brink; no blood stains its limpid glass; beautiful, pure, blessed and glorious, forever the same, sparkling, pure water!" That may have been so in his day, but no one in his senses drinks water now from an unknown source, no matter how sparkling and pure it may look, for it is not "forever the same!" In it may lurk typhoid germs or others just as harmful, and although the poison may not show in "bubbles on its brink," nevertheless it may be there. To play safe today, one never drinks from any brook he may encounter and never uses a common drinking vessel. He wants to know that the water he takes into his body is pure and uncontaminated. Knowing that, he is a wise man if he drinks a lot of that beverage, "the brightest that beauty or revelry sips!"

Ewing Galloway

Don't drink that! No matter how sparkling and pure a brook may look, in it typhoid germs or others just as harmful may lurk. To play safe today, one should never drink from any stream he encounters, though it may be miles from civilization.

THE HAZARDS OF


WESTERN UNION
1201
SYMBOLS
DL = Day Letter
NL = Night Letter
LC = Deferred Cable
NLT = Cable Night Letter
Ship Radiogram
CLASS OF SERVICE
This is a full-rate Telegram or Cable-gram unless its de-ferred character is in-dicated by a suitable symbol above or pre-ceding the address.
NEWCOMB CARLTON
CHAIRMAN OF THE BOARD
J. C. WILLEVER
FIRST VICE-PRESIDENT
R. B. WHITE
PRESIDENT
The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination
AUA1374 55 NL=WAUSAU WIS 26
MRS THOMAS VERNON=
420 EVERGREEN ST CHGO=
DEAR MOTHER BUDDY STEPPED ON A CAN THIS MORNING OUT BACK OF THE BARN WHERE THE KIDS WERE DIGGING BAIT AND CUT HIS HEEL. THE CAMP DOCTOR DOESNT HAVE TO TAKE ANY STITCHES BUT IS AFRAID OF LOCKJAW AND WANTS TO INJECT TETANUS ANTITOXIN IF YOU AND DAD SAY OK DONT WORRY BUT PLEASE WIRE=
JUNIOR.
THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

THIS is the night letter which rouses the most dependable brain of the house from rare repose two mornings after Junior and his younger brother Buddy have been packed off for camp.

Providentially, Father is out of town and out of the reckoning. Accordingly, Mother telephones to the local doctor who has always taken care of the boys and propounds the problem of the bait can, the lacerated heel and tetanus antitoxin.

The local medical man upholds the young camp physician's policy of leaving the wound wide open, dissertates on the superiority of iodine to certain unreliable antiseptics and unhesitatingly endorses the doctrine of protective inoculation with tetanus antitoxin.

Fifteen minutes later, however, just as mother is in the act of sending off her telegram of consent for the administration of this time honored, life-saving agent, the home doctor calls her back to the telephone and qualifies his advice. He has recollected giving Buddy horse serum in the form of diphtheria antitoxin four years previously and thinks Buddy may be sensitized to horse serum, in which event tetanus antitoxin might give him an overwhelming shock unless the camp doctor were aware of this.

By mid-day the two medical men have been brought together over the long distance telephone, and by late afternoon Buddy has received his tetanus antitoxin with preliminary testing and appropriate safeguards. To be sure, he does have hives about a week later from the effects of the serum, but in the main, the rash serves only to intensify his antics as cheer leader for the scrub team.

Now for the moral tag appended to this story:

The first hazard of vacation existence is the risk imposed by lack of accurate knowledge of the medical history and present physical condition of individual youngsters. Wherever children are handled in groups during vacation, whether in summer schools, travel groups or camps, such knowledge on the part of those in charge is essential. What diseases has an individual camper had, and against what has he had protective inoculations? Has he a special food or pollen sensitivity making him subject

CAMP LIFE!

By GAYLORD W. GRAVES

to asthma, hay fever and other related conditions in an environment regarded as generally healthful? Has he ever had an attack suggesting appendicitis? Has he ever raised a suspicion of rheumatic heart infection? Has he ever had a fainting attack or convulsive seizure of an epileptic type? Does he occasionally walk in his sleep? Has he had ear or sinus infection, making diving and underwater swimming inadvisable? Are his teeth in good condition? Is he handicapped by subnormal glandular activity, which for the present makes him too obese and too weak muscularly to compete with others of his own age without undue strain on both his nervous and circulatory systems?

The thin and wiry youngster with the propensities of a water rat who stoically disregards his own shivers ought to be chased from a cold swim to a brisk rubdown in a warm tent many minutes before a better insulated fat friend emerges from the water. The same thin fellow may hop through four or five sets of tennis without fatigue, while his obese opponent gets breathless in two sets.

Truly a foremost hazard of vacation is misapplied and poorly directed athletic activity, and this is not the fault of the boys and girls who so consistently strive to follow the old and hard tradition of unrestrained, keen competition.

If we admit the situation may call for individualization in assignments to sports, hikes and canoe trips, why not cultivate a university atmosphere that fosters fishing, photography, dramatics and manual training as well as grueling wrestling and rowing contests? Certainly the situation as a whole calls for teachers and counselors with multiple tastes, elastic minds and intelligent appreciation of the fact that the flower of youth is extremely variegated and always unfolding new aspects as it develops. Probably the most important difference between a good camp and a poor one is determined by respective attitudes toward this challenging truth.

Although the need of giving serum to a person who is sensitized may seem a remote possibility, this contingency is not imaginary. Certainly such things as the bait can are ever-

present menaces calling for the stocking of tetanus antitoxin as part of standard vacation equipment wherever it cannot be secured otherwise without delay.

While it is possible to immunize against poison ivy by a series of treatments, ordinary enlightenment and care should suffice to make such immunization unnecessary for those who only infrequently are exposed to contact with the plant.

The American Red Cross has emphasized the importance of preventing the external surface of clothing which has been in contact with poison ivy from touching the skin. Exposed skin surface should be washed with strong laundry soap and water, without scrubbing, and then cleansed with gasoline away from fire. Soap paste made by boiling soap in water to the consistency of lard may be applied cool for an overnight dressing.

Simple alkaline applications, such as weak ammonia and bicarbonate of soda solution, are of well known efficacy in relieving insect bites and stings. A saturated solution containing as much baking soda as water will dissolve is the simplest available application for ordinary burns of limited extent. For more thorough treatment, the use of tannic acid either in a 2 per cent solution or in an appropriate ointment, which is available at drug stores, is now generally accepted procedure. A strong solution of tea will also serve the purpose.

Of course the commonest source of vacation burns is not the frying pan but the sun. A touch of sun is one thing; a toast of sun, another. Authoritative information on the effect of ultraviolet rays advises us that a deep tan prevents the penetration of the rays into the deeper skin layers and their beneficial systemic action correspondingly. Therefore, unaccustomed exposure of the bare and untanned body to intense sun for long periods may be said to be about as foolhardy as the ancient Indian rite of walking on live coals. A first degree sunburn is more than enough.

Fortunately the sunburn hazard is a hazard of the first week of vacation, and there is a fair chance that Junior may be able to instil enough temporary conservatism into Buddy to save a big cosmetic bill in the interest of new fishing tackle.

Fish hooks and splinters deserve special consideration. An imbedded fish hook cannot readily be pulled out until it has been shoved gently ahead so that the barb protrudes sufficiently to be cut off with pliers or file. An antiseptic is then applied.

Bleeding cuts, although usually readily controlled by pressure, are at times much more terrifying than bleeding noses, even though the cut hemorrhages are likely to be the less profuse. Regardless of all the good first aid rules about tourniquet applications, a calm business-like determination to stop a leak as one would a hole in his pocketbook is a first requisite in dealing with most varieties of bleeding. Nature utilizes her own cement rather effectively when given a chance. Vigorously blowing a bleeding nose free of clots is no help. Ordinarily a cold wet compress held against the bleeding nostril in such a way as to make firm pressure indirectly against the middle partition of the nose will control nose bleed.

Snake bites and dog bites provide additional unpleasant injuries to the body through its surface integument. In snake-infested regions it is a good precaution to make sure that snake antivenin is readily available at all times and that directions for snakebite management are studied and understood. A western physician recently cited a considerable number of cases of rattlesnake bite from his own practice, only a few of which were fatal. Every victim of dog-bite should have the wound immediately cauterized. Every dog which has bitten a person should be isolated and watched for symptoms of rabies. This scheme of management makes

possible early institution of Pasteur treatment for rabies when it is needed.

Eyes and ears present their own problems. To turn up an eyelid for removal of a foreign body, stand behind the seated subject and ask him to look down. Then grasp the lashes of the upper lid between thumb and forefinger and with your other hand holding a match stick horizontally across the surface of the lid, gently turn the lid backward over the match. Wipe the offending particle off the under surface of the everted lid with the corner of a clean handkerchief. If any difficulty is experienced, abandon the attempt at once, and take the patient to a doctor. If the foreign body is imbedded or if the eye has received injury in another form, wring out a clean handkerchief in cool boric acid solution or water, and keep the eye covered with it until a doctor can be consulted.

Diving and underwater swimming are not advisable for persons who have had sinusitis or serious ear inflammation. When earache occurs, do not attempt treatment until advised of the proper type needed.

Unfortunately, perhaps the most important channel of entrance from the outside of the body to the inside has unlimited freight handling possibilities. Hence, it seems as natural for a young vacationist to set no bounds on his gastric capacity as to disregard the limitations of his young heart. At the so-called "shack feast" he most frequently meets his Nemesis. Following the biggest and best regular meal of the week, it is customary for selected groups of kindred souls to cook their own Sunday night suppers in secluded spots away from the lodge table. At these memorable spreads the perfectly unbalanced ration is completely attained. Bacon and beans, cheese and hot dogs, sardines and sweet corn, coconut cookies and pickles, watermelon, sweet potatoes and maple syrup and ice cream all have to be sampled in the manner exemplified by knights of old after a successful boar hunt. "You can save trouble for yourself," warned one camp physician in instructing his successor, "if you follow up trips to town for special supplies with routine bedtime doses of castor oil and rhubarb and soda for everybody." To paraphrase the old nautical warning: When many brave hearts build a fire on the beach, doctor, be there! Whether a confidential parental admonition about the dangers inherent in overeating might forestall trouble in a given case is doubtful, but at least a hint about the more common incompatibilities of various foods might be ventured in every second letter from home in order to be in a position eventually to say, "Son, I told you so."

Typhoid and dysentery, while today infrequent, hold a greater menace for vacationers than for home-stayers. Typhoid vaccination is advisable for all campers and tourists. On the eve of every expedition away from a camp base the ever existing menace of the country well and stream of unknown source and course should be emphasized. Not even the mildest attack of diarrhea should go unreported to the camp physician.

In general, the hazards of vacation are lack of understanding and incomplete consideration of individual problems based on past experience, disregard of moderation in entering on unaccustomed activities, ill-advised eating, avoidable injuries to the outside of the body and the not to be forgotten danger of catching cold through too long a sojourn in cold water. Only exceptionally today does a preventable drowning accident happen in a properly supervised camp.

A small first aid kit with a brief but comprehensive book on first aid should be standard vacation equipment.

Withal, our emphasis on some of the more common hazards of vacation should not obscure the shining fact that the good of vacation far exceeds its possibilities for ill.

What the Mouth Can Tell

The alert dentist not only looks for cavities in the many mouths he examines; but he is also on the watch for indications of general disease that may be the underlying factors in causing the symptoms about which the patient complains. Several interesting clues to this work are divulged by **LESTER R. CAHN**

WHEN we speak of general disease and the mouth, we immediately think of the results that infected teeth and gums have on the system. Emphasis has been rightly placed on the fact that abscessed teeth and pyorrhea can cause rheumatism, heart trouble and many other locally unaccountable disturbances. Yet there is another phase to the connection between the body as a whole and the mouth, which has not been sufficiently stressed. There are a large number of serious diseases in which early symptoms may be seen in the mouth long before the patient is aware that he is afflicted.

A young woman about 30 years old visited her dentist for a routine examination of her teeth and mouth. The dentist noticed that her teeth were somewhat movable. X-ray pictures of her jaws and teeth revealed that the jaw bones were in a decidedly abnormal condition. The patient was sent to a laboratory for a chemical examination of her blood and to an x-ray technician for pictures of the rest of her bones. The chemical analysis showed that she had too much calcium in her blood serum. The x-ray pictures disclosed that there were a number of hollow spaces in the bones, significant of the fact that the calcium had been withdrawn from these areas. She was referred to a physician who, with this accumulated data, decided that the patient was suffering from a condition known as hyperparathyroidism. This is a disease in which the parathyroid glands—small bodies in the neck that regulate the calcium in the system—were overfunctioning, thus causing calcium to be withdrawn from the various bones into the blood and discharged as waste matter. An operation disclosed that she had a tumor of one of these parathyroid glands. She made an uneventful recovery, and a perfect cure resulted.

Hyperparathyroidism is a devastating ailment, and this woman may have lived for many years a tortured and helpless cripple if an early diagnosis had not been made.

Loose teeth do not always indicate a disease of the mouth; they may be the first signs of some underlying general disease. This is especially so if one or two isolated teeth become suddenly loose. Records show that acute leukemia may be manifest in this way, and cancer of the jaws is occasionally first noticed when the malignant process has progressed to the teeth and destroyed their bony support, thus loosening them.

Another young woman went to her dentist because her gums were bleeding. Examination revealed pale gums. There was no tartar or irritation, which is the usual cause of bleeding gums; in fact the hygiene of her mouth was excellent. Her tongue was red, glossy and had a rather polished appearance. The patient said that her tongue frequently tingled and burned just like the tips of her fingers did. She also suffered from indigestion. The dentist realized that the bleeding from her gums was just a manifestation of a general disease—more than possibly a disturbance in her blood. A blood examination showed that she was suffering from pernicious anemia. Accordingly, she was directed to her physician who, by suitable treatment, alleviated her illness.

Bleeding from the gums is an important mouth symptom. It may forecast pernicious anemia, or it may indicate the presence of other

Ewing Galloway

A college student went to his dentist because his mouth was sore. Close examination revealed two small blisters on the roof of his mouth. Noting these, the dentist suspected not tooth trouble, but chickenpox.

blood disturbances like purpura [purple skin patches] or leukemia. People on deficient diets, especially those lacking vitamins A and C, frequently have spongy and bleeding gums. It is a warning that should not be ignored.

Individuals may "carry on" for a long time, suffering from varying discomforts that portend some underlying disease; yet they will be totally ignorant of this fact until some casual examination discloses the cause of their ailments. The following story is illustrative:

A middle-aged woman had small recurring abscesses in the gums that had troubled her for a long time. Incision would bring temporary relief; but after a few weeks the abscesses would re-form. Another dentist directed her to a clinical laboratory for blood and urine examinations, which disclosed that there were excesses of sugar in both the blood and urine. In other words, the patient was a diabetic. She was unaware of her condition, although undoubtedly she had had other symptoms that

she ignored. In a short time she probably would have become dangerously ill, if a mouth symptom had not been correctly interpreted.

Sir William Osler once said, "To know syphilis is to know disease." Its manifestations and various stages are frequently seen in the mouth. Syphilis is a great imitator of other abnormal conditions, and its signs not uncommonly look like ordinary lesions. One must always be on the watch for its presence, because the patient may be totally unaware that he or she is infected. The next case history exemplifies this point.

A young man had a swelling of the gum over an upper front tooth. It was thought to be a tooth abscess, and so it was lanced. But this did not relieve the condition. A short time later the front tooth was extracted. Instead of the swelling subsiding after this operation, it continued to grow. A Wassermann test was then advised, which disclosed the presence of syphilis. The patient was referred to his physician, and under proper antisyphilitic treatment the swelling on the gum disappeared.

The unfortunate thing in this case was the fact that the tooth was needlessly extracted, because a mouth symptom of a general disease had not been correctly investigated at the beginning.

Infectious diseases characterized by an eruption, such as chickenpox and measles, are popularly thought to be associated with childhood. While it is true that children are most prone to these infections, adults are frequently afflicted. The mouth may show definite signs of these conditions.

A college student went to his dentist because his mouth was sore, and he felt ill and feverish. Close examination revealed on the roof of the mouth two small blisters that looked like water blisters. The skin of the patient's face also showed two similar lesions on the forehead. He advised the young man to go home and call his physician, as his ill feeling was not due to a sore mouth but to chickenpox.

Pain about the face and jaws is a common ailment, for the relief of which the dentist is frequently consulted. In many instances a diseased or badly placed tooth is the cause of the mischief; but in several cases, teeth have been needlessly lost without benefiting the sufferer. These cases require a great deal of study, and it is often difficult to arrive at a correct diagnosis.

An elderly woman had a severe attack of facial neuralgia. Her husband, being a physician, immediately thought that perhaps her teeth might be responsible. Dental examination disclosed that the only possible cause that might have accounted for her condition was an upper dead tooth. The dentist was a man of considerable experience, and he knew that as a rule dead teeth, which in themselves give no discomfort, do not cause such severe facial pain. He advised caution and suggested treating the patient with sedatives for a few days. This advice was taken. Two days later the woman's husband called the dentist and told him that his wife had awakened that morning with her face paralyzed on the painful side and that the real cause of her condition had been due to a facial palsy.

Reflex pain to the face and jaws simulating toothache may be associated with menstruation and early pregnancy. It may also be an accompanying symptom of coronary thrombosis.

As can be gathered from these case histories, the examination of the mouth entails more than the mere search for cavities in the teeth. The appearance of the mucous membrane covering the gums, cheeks and tongue must be carefully studied. The movements of the jaws, the manner of speech and general appearance of the patient must be observed, which may lead the dentist to detect, and perhaps prevent, what may be a fatal illness if neglected. This is well seen in the following story.

A sad-faced young woman went to the dentist to find out why she had such great difficulty in chewing. Her jaws became tired after a brief attempt at eating, and even while recounting this tale her speech became hesitant, and her words trailed off like one going to sleep. The dentist noticed that her sad expression was due to her drooping eyelids, and he felt sure that her condition of jaw weakness was due to a serious disease of the muscles known as myasthenia gravis. A physician confirmed this diagnosis. The young woman was given appropriate treatment, which fortunately is keeping her alive and allowing her to lead a useful life.

I have given only a few of the general diseases about which the mouth can tell. Mention may also be made of such others as skin diseases, tuberculosis, poisoning by mercury, bismuth, lead and other drugs, glandular dysfunction and many other ailments.

In conclusion, it may be said that your dental advisor is an important factor in health service. He is well trained in the fundamental medical and biologic sciences. His function is not only the treatment and correction of dental diseases and malformations, but he also fits into the scheme of preventive medicine by being always on the watch for mouth symptoms of general disease.

S. R. Winters

AMUSING MEDICAL PATENTS

Fig.4.

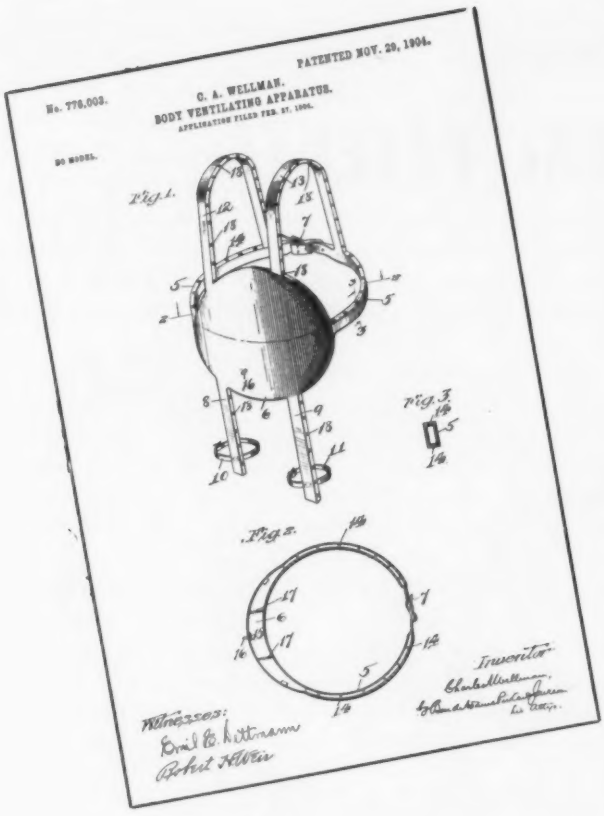
Oldtime patents claimed the power to do almost everything. This one is labeled simply, "Apparatus for treating diseases."

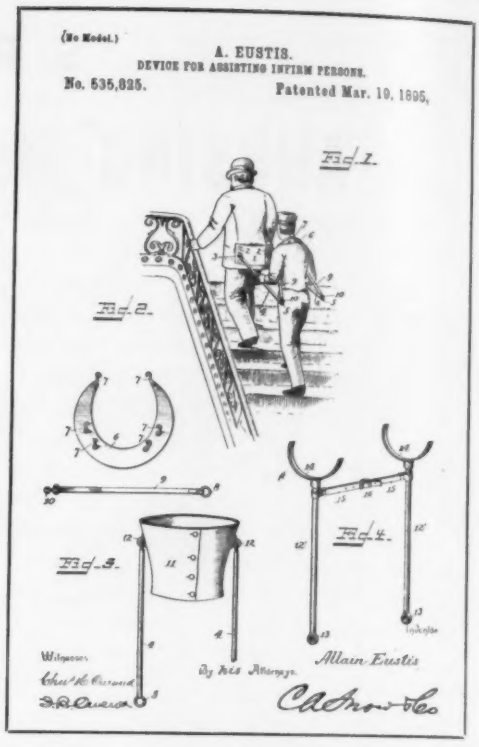
Inventor: Hercules Sanche
Patented: July 27, 1897
No. 587,237. No Model.

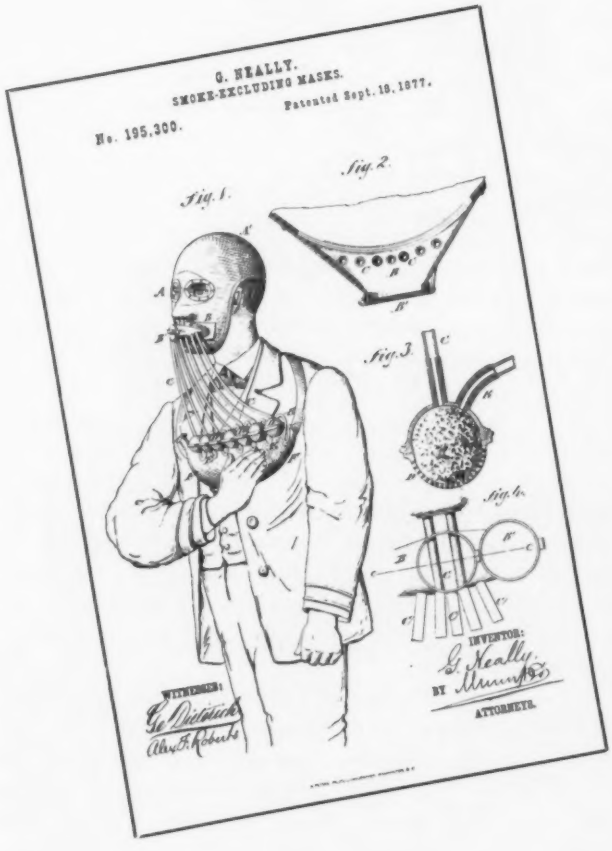
HUMOR and pathos intermingle in the showcases and files of the U. S. Patent Office where models and sketches of forgotten inventions rest in state, bearing mute testimony to the shattered hopes of the overly ingenious. Here, too, the strangely weird devices "rub elbows" with great inventions of economic importance, which involve in some cases hundreds of millions of dollars.

That there have been less than a hundred really great American inventions is perhaps significant, for more than 2 million patents have been granted. Many of these, however, have proved useful and of constructive value, while others are little more than ludicrous or even incongruous exaggerations based not only on generally accepted principles but also on little known theories.

The word "patented" stamped on an appliance, therefore, carries no guarantee that the device will actually accomplish all that is claimed in the description. It merely serves notice to the public that a contract has been entered into between the government and the







inventor, under which the inventor discloses "certain new and useful improvements" which he might otherwise have kept secret. In consideration of this disclosure the government grants the inventor a seventeen year monopoly in the manufacture and sale of his invention. At the expiration of the letters patent the invention becomes public property.

What wonders the world might have been denied had there been no law to protect the ideas of prolifically inventive minds! Without the protection afforded by law many an inventor might have refused to launch on an unsuspecting public the one gadget for which he firmly believed the world to be waiting.

The surgical division of the U. S. Patent Office is a veritable magnet for novel and even bizzarre ideas. A glimpse of just a few of the so-called surgical patents suggests that the greatest benefits to be derived from some of the more sensational might lie in applying Irvin S. Cobb's theory that "A laugh a day keeps the doctor away."

One invention, however, which precludes any laughter whatever on the part of the patient resembles nothing so much as a glorified mouse trap. But the specifications (July 2, 1912) according to George A. Peate and Thomas Beattie, the inventors, claim that it is a "new and useful improvement for preventing and curing stammering and stuttering."

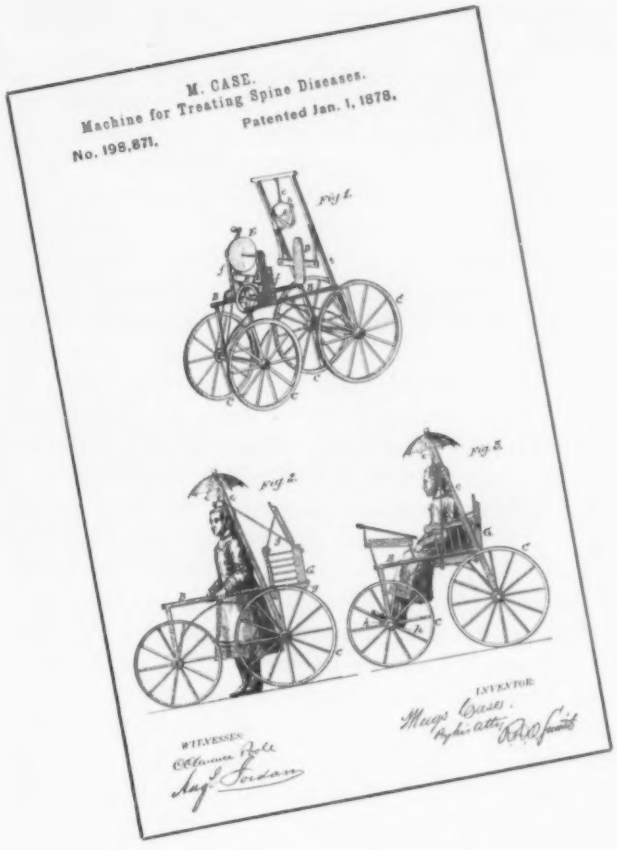
The apparatus is designed to be worn within the mouth. A curved base plate is shaped to fit the lower jaw around the gums and inside

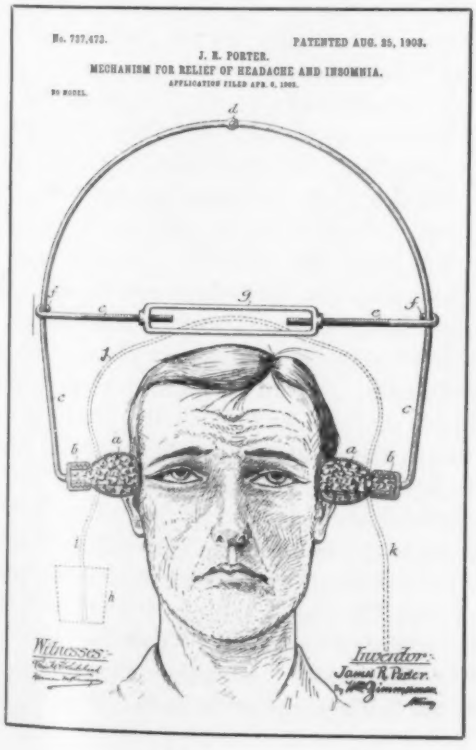
the lower lip. An arched cross bar fits into the roof of the mouth and holds the tongue depressing device, which consists of two tongue depressing springs, to take care of the different parts of the tongue used in sounding the various consonants. The downward pressure exerted thus prevents a too high or too strong movement of the tongue toward the roof of the mouth.

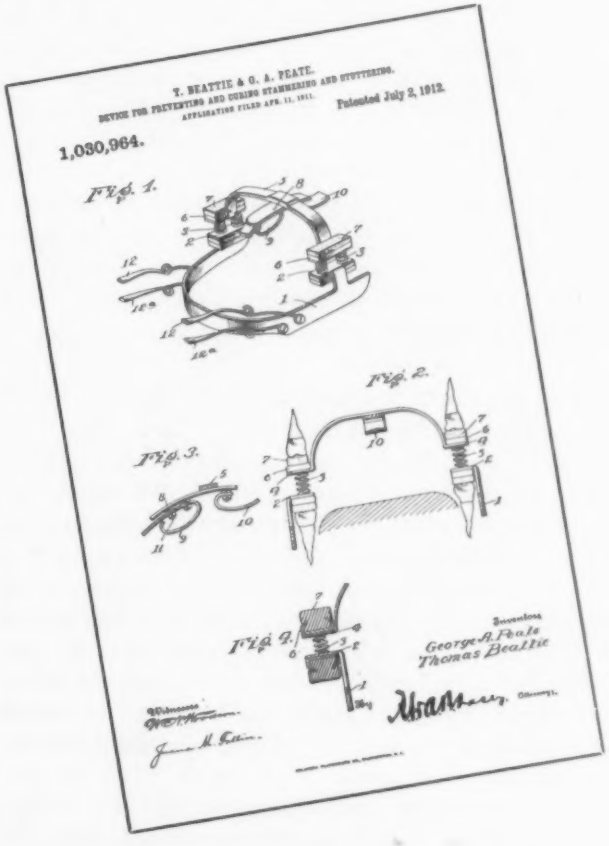
Another set of springs inserted in rubber bumpers or pads fits between the upper and lower sets of teeth so as to have a tendency to open the jaws, while at the same time permitting them to be closed in articulating but "under some degree of restraint."

Two pairs of spring rods, an upper and a lower, which are designed to project from between the lips of the patient so as to exert an opening pressure on the lips, gives the final touch to this mechanism for controlling speech energy. Judging from the specifications, the statement of the inventors would seem to be most accurate: "The device is designed to hold the articulating organs at a widely separated position so arranged that the tongue and lips may move under some degree of restraint, the device relieving the mind of all responsibility of controlling these organs."

One of the early air conditioning machines for hygienic purposes is termed a body ventilating apparatus (November 1904) by the inventor, Charles A. Wellman. By the use of this appliance, the body of the wearer is constantly ventilated by jets of air issuing from


M. CASE.
Machine for Treating Spine Diseases.
No. 198,871. Patented Jan. 1, 1878.
Witnesses: Inventor:


No. 727,673. PATENTED AUG. 25, 1903.
J. R. PORTER.
MECHANISM FOR RELIEF OF HEADACHE AND INSOMNIA.
Witnesses: Inventor: James R. Porter.


T. BEATTIE & G. A. PEATE.
DEVICE FOR PREVENTING AND CURING STAMMERING AND STUTTERING.
1,030,964. Patented July 2, 1912.
Witnesses: Inventors: George A. Peate, Thomas Beattie.

tubular straps automatically operated by respiration.

The device consists of a belt to be fitted around the waist of the wearer. Attached to the front of the belt is a bag or sack, which is kept distended by springs. Tubular straps extend down the legs and others over the shoulders in the manner of suspenders to support the belt and also act as air conduits. When the wearer inhales, the inner wall of the sack is forced outward, compressing the springs and forcing the air in the sack through the tubes which have small outlets. Thus the body is practically enveloped in a sheet of cool fresh air, rendering benefit as far as the health of the wearer is concerned, according to Mr. Wellman.

But the air cooling system for the body is not the only object of this interesting contrivance. It also provides a means by which the form of the wearer may be improved, particularly of thin persons who wish to increase their girth, so the specifications declare. The sack, it is said, imparts to the form a very pleasing and robust appearance and may be made to fill out any deficiencies in the outline of the wearer; something on the principle, we presume, of the "Patent Bon Ton Bustle" so widely advertised in Godey's Lady's Book as "an admirable assistant to dress for it gives a beautiful contour to the figure."

Headaches come in for more than their share of "relief." Patented cures run the gamut of style and description. One of the more simple contrivances which is recommended by the inventor, James R. Porter, consists of a pair of glass bulbs secured in the sockets of an arched and jointed rod. When the bulbs are filled with ice water, they exert cold pressure on the temples, not only allegedly curing the patient's headache but relieving all tendency of insomnia. The illustration might easily be mistaken for an imaginary picture of how a headache feels.

If a patient desires something a little more strenuous, there is a headache hanger by which the neck muscles are exercised. The apparatus consists of a harness designed by John Kleinbach of Spokane, Wash., which fits over the head in halter style. A pulley is attached to the top of the harness, through which ropes run to a pair of ceiling pulleys and down to a pair of stirrups. The patient grips the stirrups firmly in his hands, and by exerting pressure downward he lifts himself from the floor, secured, of course, by the halter-like helmet. A novel variation of the idea of lifting oneself by one's bootstraps.

The electrical transference of the main ingredients of a beverage or medicine into the organic tissues by means of "kataphoresis" was the claim of Johan Jakob Stanger of Ulm, Germany, when he applied for a patent on his electrical mouth-bath. The object is a device for "applying electricity to medical purposes by the drinking of an electrified fluid or by washing the mouth therewith."

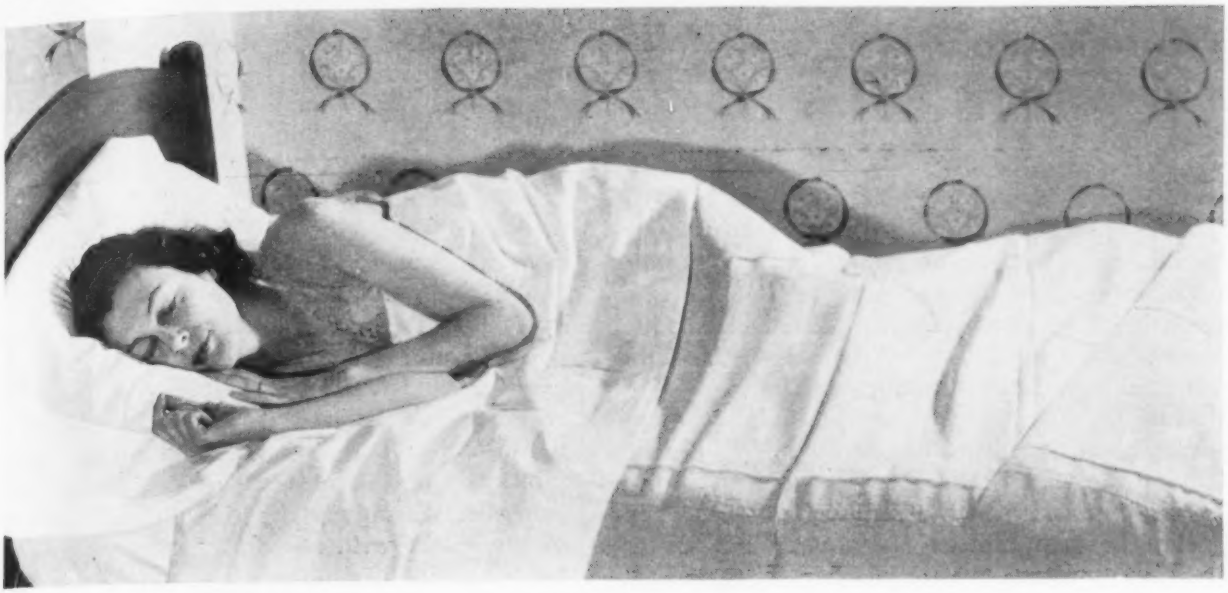
For this, a perforated glass tube is connected to a suitable source of electricity. The tube, which is slightly bulbous, is filled with a certain liquid and closed with a screw cap. The patient takes the tube in his mouth and sucks the liquid through the holes, at the same time completing the electrical circuit by taking a second electrode in the hand and applying it to any particular part of the body. The action of the electrified medicine can in this way be localized. The medicine, it is specified, should be adapted to the complaint of the patient.

Hercules Sanche of New Orleans was perhaps one of the most prolific of all the inventive geniuses of the nineties. He was apparently a steady "customer" of the patent office. The more intricate the design he conceived, the greater his claims for its curing properties.

One apparatus which is fascinating in its very complications has no specific name other than the vague designation of "Apparatus for Treating Diseases." Sanche describes an office equipped for connection with a water cooler in the room and with a lamp stove on the roof. From the water cooler, wire or tinsel cord supported on brackets is draped about the room, the end connected with metal plates or coils. A branch wire also extends to the roof, making available solar heat. By this means the patient is "connected with the earth and is put in the same electrical tension with the earth."

The theory of this electrical equilibrium apparatus, Sanche explains, is to restore and preserve normal conditions of electrical tension and thus allay disease. His conclusions were drawn from observation of hogs, turtles, alligators and the lower animals that lie in the mud and readily assimilate electrical conditions of the earth, making them therefore free from disease. Man and the higher animals who are covered with a nonconducting coat and are more or less insulated from the earth are subject to disease in marked contrast, Sanche asserts in his patent claims.

Magnets have always played a rather dramatic role in the field of invention. A magnetized hat band was patented by Fred H. Brown of Chicago, which the specifications mildly claimed was for "therapeutical purposes." The nature of this unique item is a pliable metallic strip or *(Continued on page 658)*



During rest or sleep periods the physiologic processes of the body are storing up energy and repairing the wear and tear on the organism, which resulted from the day's activity.

MUSCULAR FATIGUE

By ELLEN KELLY

FATIGUE is a familiar complaint. We have all had it at one time or another. Sometimes we rather brag of being "all in," as though it were smart. Actually we know what fatigue is; but we might know better what to do about it if we analyzed it objectively. The question is, "What has taken place in the body when we have the feeling of muscular fatigue?" And this becomes increasingly important in these days of high key existence.

Recall for the moment the old simile of the human being compared to a steam engine. The engine burns coal and so manufactures steam pressure, the force that makes the wheels go around. Waste products of this activity go up the chimney or are carried out of the lower ash pit. The principle is the same in the human body, but the details work out differently. The human body burns fuel from its food and takes oxygen from the air, and with these elements manufactures energy which the muscles use in order to contract, produce movement and accomplish our daily activity. Its waste products are thrown off into the blood stream and finally carried out of the body. But the greatest difference between the steam engine and the body is in the body's need for rest and recuperation.

Fatigue is a perfectly normal reaction of the body. One should not be alarmed at a feeling of fatigue following a hard days' work. Human beings are meant to be active, are intended to contribute their talents to the life of the community. And if they do this they shall become fatigued. It is certainly true though that many people become fatigued out of all proportion to the value of the work they accomplish and do not recover full energy after a night's sleep. The truth is that few people approach their optimum efficiency in the performance of activity.

At one end of the range of normal individuals we find the strong, vigorous, habitually active person who seems never to grow tired. How we envy him! The weak, asthenic inactive person is at the bottom of this range of normal individuals, and there are all degrees of efficiency in between. The active individual attacks a job with the trigger-like precision of a highly accurate and sensitive machine. The habitually inactive one laboriously drags himself out of his lethargy and stumbles clumsily through the motions. Where lies the difference?

Take a look at the mechanism in the body for muscular activity to learn what this condition of fatigue really is and why it develops. If you wish to move your arms, you must first make up your mind to do so. That is a nervous process requiring energy. You send the

message out along a nerve to the muscles in the arm. There the nerve stimulates the muscle to contract. In order for the muscle to obey that stimulus to action, it must convert into energy the food and oxygen which it gets from the blood. With this energy you contract your muscles, and as with all activity, waste products result. These are carbon dioxide and a substance known as lactic acid. Movement demands adequate food and oxygen for every muscle fiber and removal of waste products produced in each fiber by the activity, lest they glut the muscles and exclude oxygen.

Just how fatigued an individual becomes is determined by how efficient his body is in supplying the essential food and oxygen to all parts of the body and in the removal of waste products. Several factors are responsible for this efficiency.

Since oxygen must be carried wherever needed in the blood, it is important that the blood be able to absorb large amounts of it. Blood can hold oxygen in proportion to the hemoglobin content in its red corpuscles. Anemic people are able to carry less oxygen in their blood. Since the blood gets its oxygen from the air supply in the lungs, it behooves the lungs to expand deeply and provide good aeration. The person with a flexible chest is able to expand the lungs deeply and thus offer greater oxygen supply for the blood when the exertion demands it. Habitually sitting in cramped slumped positions and leading a sedentary life in general is anything but conducive to a good chest expansion. It also becomes obvious that greater oxygen is available to the lungs if one's exertion takes place in the open air, rather than in stuffy, poorly ventilated quarters.

Furthermore, a good conduit system is necessary to carry the oxygen supply, once it is taken up by the blood, to all the muscles and organs in the body and to remove the waste products of activity, which are thrown back into the same blood stream. This means a good circulation, and circulation is dependent to a large extent on heart action. The heart is a muscle, and like other muscles it becomes strong when used. We are familiar with the type of exercise which makes strong legs and arms. The way to develop a strong and enduring heart is to make it work, and the work of the heart is pumping blood out to the lungs and to the rest of the body. As activity increases in strength, the demands on the heart become increasingly great. Therefore, frequent exercise, gradually increasing in severity and duration is the best way to train a good functioning heart. And with this training process the body learns to accomplish more work with the development of less fatigue.

The onset of fatigue may be further retarded by the skilful coordination of muscles in the graceful performance of an activity. Conversely, an uncoordinated and awkward performance is accompanied by strain and exhaustion. The relatively effortless skill and grace you desire may be developed to a large extent by the elimination of useless movements of the body in any given activity. This faculty has been called differential relaxation, that is, a relaxation of those parts of the body not needed in the activity, thus conserving energy for the vital part of the movement. This comes with practice. Compare the smooth resilient walk of the golfer with its relaxed arm swing to the bustling, choppy totter so frequently seen on the streets. The first is infinitely less fatiguing than the second and can be continued for much longer periods before the onset of fatigue.

It has been said that 85 per cent of the energy of the body is required for purely maintenance purposes—just to keep the breath of life in us. The bedridden patient will need 85 per cent of the energy that he uses in active life. The remaining 15 per cent of the energy is used in the accomplishment of life's work, one's vocations and avocations. When one has burned up his 15 per cent energy and arrived at the point of fatigue, one should rest. It is then, however, that temptation to borrow from the 85 per cent energy needed for organic maintenance occurs, with the postponement of resting. This can be done, but it is dangerous, for the debt is seldom paid back. And organic development, especially during the growing years of childhood and adolescence, may suffer from the unpaid debt.

If you are to avoid this borrowing policy you will have to stop activity when the fatigue point is reached and rest until the physiologic functions of the body have caught up. You may conserve your energy, that is, slow down the energy consumption within your body, by maintaining a high general health, by keeping active (in training you might say) and by performing your daily activities in a relatively relaxed, unhurried and skilful fashion and, in so doing, delay the onset of fatigue. But once the available supply of energy is gone, rest is essential.

During rest or sleep periods the physiologic processes of the body are storing up energy and repairing the wear and tear on the organism, which resulted from the day's activity. Adequate rest varies with the amount of activity which is carried on during the day and with the

efficiency of your repair system. The better your general health, the more rapid and complete the recovery. The most important consideration is the early resort to rest before energy consumption goes in the borrowing business. Few people are able to recuperate completely in less than eight hours of sleep, and a large percentage of persons require more than eight hours sleep every night.

Take frequent, but not violent exercise, outdoors when possible. But avoid overexertion. Consider your general condition and recent habits of exercise before indulging in strenuous and long continued ac- *(Continued on page 659)*

The smooth resilient gait of the practiced golfer is infinitely less fatiguing than the bustling, choppy totter so frequently seen on the streets.

The DOCTORS CONVENE

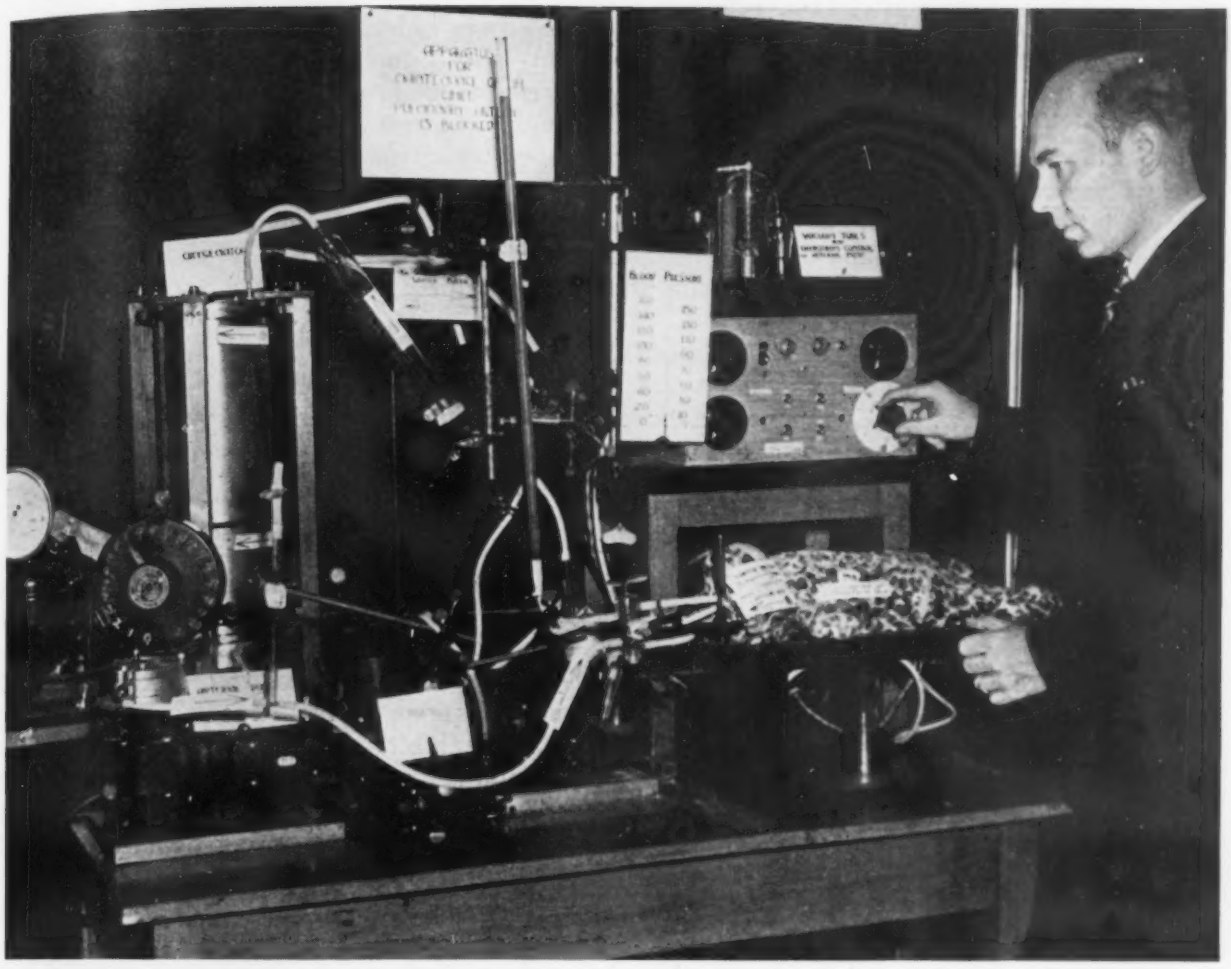
The ninetieth annual session of the American Medical Association brought physicians together from all over the continent. For five days they reviewed the past, probed the present and charted the future of medical science, declares **LAWRENCE C. SALTER**

Acme

An oxygen mask for treating respiratory ailments is demonstrated at the convention of the American Medical Association.

"THE common man has a better chance of keeping well or getting well." Thus Dr. Rock Sleyster, Wauwatosa, Wis., newly installed president of the Association, summed up the public benefits of the ninetieth annual session of the American Medical Association, held the third week in May in St. Louis.

For five days, more than 7,400 physicians reviewed the past, probed the present and charted the future course of their constant battle with disease and other menaces to the health of mankind. From more than 500 papers read to the fifteen scientific sections of the Association and from 235 scientific exhibits, these physicians took back for application in their home communities the new weapons of medical science developed during the past year. Through the pages of *The Journal* of the American Medical Association this knowledge, which was brought to light at the annual session, will be further disseminated among the 113,113 members of the Association during the coming months by reprinting therein the texts of these section papers.



A device that will temporarily maintain life in an animal was shown at the convention of the American Medical Association. The machine artificially maintains the blood flow when the flow through the heart and lungs is completely blocked (pulmonary embolism).

Not only did the annual session provide increased efficiency for the practice of medicine; but also, through action of its governing body, the House of Delegates, it pointed the way toward a distribution of medical care to the indigent and medically indigent without sacrificing the principles of democratic government.

Without a dissenting vote, the House of Delegates adopted a report on the Wagner National Health Bill which said in part:

The American Medical Association would fail in its public trust if it neglected to express itself unmistakably and emphatically regarding any threat to the national health and well being. It must therefore, speaking with professional competence, oppose the Wagner Health Bill.

The House of Delegates would urge the development of a mechanism for meeting the needs for expansion of preventive medical services, extension of medical care for the indigent and the medically indigent, with local determination of needs and local control of administration, within the philosophy of the American form of government and without damage to the quality of medical service.

It suggested that the problem could be met

. . . through a federal agency to which any state in need of federal assistance can apply, or through a new agency created for this purpose or through responsible officers of existing federal agencies, the mechanism for which must be developed by the Executive and the Congress, who are charged with these duties.

Such a method would afford to every state an agency to which it might apply for federal assistance without involving every other state in the Union or the entire government in the transaction.

To illustrate its point in standing for local determination of need, the report said that no one would think of granting flood relief funds

to all states just because one state required such emergency aid.

SCIENTIFIC ADVANCES

From the scientific point of view, the features of the session were the reports and exhibits pertaining to the newer investigations in industrial health, the vitamins, the glands, uses of sulfanilamide and its derivative, sulfapyridine, as well as surgical and other treatment technics.

These reports showed that life can be preserved under several conditions that once meant almost certain death. Such menaces as infections caused by the streptococcus germs now are yielding to sulfanilamide. Pneumonia, one of the great disease agencies of death, appears to be approaching its "Waterloo" under the combined use of serums and the new drug, sulfapyridine. Improved methods of determining the proper dosage of sulfanilamide and sulfapyridine were described as well as other safeguards against the dangers involved in their use.

The family physician, returning to his home from the session, took with him not only an increased knowledge of how to use sulfanilamide and sulfapyridine but also an understanding of their limitations.

The dangers of death from coronary thrombosis [where a blood clot forms in an artery supplying the heart muscle] may be largely removed in the near future by use of drugs that lessen the stress on the heart until the arterial plug dislodges itself or is dislodged by surgery.

New operative procedures for heart injuries or ailments, unheard of five years ago, were described at the session. Other papers described the constant advances being made in the protection of the health of the working man from hazards associated with his employment.

In the field of nutrition, the latest advances were described for determining the relationship of vitamins and diet to disease and physical and mental well-being. Along with this, the Association issued a report, which warned that:

> Vitamins have been played up in a grossly unscientific manner to the public. Particularly to be disparaged are the many unnecessary poly-pharmaceutic preparations containing vitamins, sometimes combined with minerals, which are constantly urged on the public.
>
> There is but little need for vitamins as contained in such products and certainly no need medically of complex unscientific mixtures sold under "catchy" names with misleading claims indicating usefulness in the treatment of various diseases and as cosmetics.

Nor were there forgotten the mental diseases, foremost among the great plagues, for which medicine is just beginning to find means to conquer. Methods of solving complications involved in the use of such treatment agents as metrazol and insulin were described, and the future outlook for victims of such conditions as epilepsy, spastic paralysis, feeblemindedness, dementia paralytica [insanity resulting from syphilis], and dementia praecox [insanity marked by melancholia] was brightened by the promising investigation reports made at the session.

SCIENTIFIC EXHIBITS

The scientific exhibits in themselves constituted almost a complete postgraduate course in all phases of medicine.

In no other portion of the session was the unselfishness of the medical profession better portrayed than in the scientific exhibits. There, in 235 booths, many of the outstanding men in the medical world shared without thought of personal gain the results of their research in various phases of medicine during the past year. Their exhibits—ranging from elaborate working models of new apparatus to colored moving pictures, charts and drawings and in some instances living models on whom to demonstrate newly discovered technics—were prepared and presented at their own expense. Only one thought motivated their research and their painstaking care in preparation of their exhibits to portray that research as well as the long, tedious hours they spent on their feet in the booths during the five days of the session describing their work to the medical audience. And that thought was how to further the protection of the health of mankind and alleviation of human suffering. They had worked unselfishly obtaining their new knowledge, and they shared it unselfishly. Some conception of the size of the scientific exhibits is revealed by the amount of electricity required for them—250,000 watts.

TECHNICAL EXHIBITS

In the technical exhibits on another floor of the Municipal Auditorium were displayed the latest medical equipment, valued at more than $1,000,000 and exhibited by 240 firms with nearly 1,000 experts to demonstrate the improved appliances and new devices.

During the session there were registered 7,412 members of the Association, 4,577 physicians' guests, 406 interns, 413 technicians, 1,102 nurses and 936 medical students. In addition, there were those associated with the technical exhibits.

RECOMMENDED for AUGUST

"THE STRANGEST THING THAT HAS HAPPENED to me since I became a father of a boy some four months ago is the change in my sense of humor!" With this, Edgar A. Guest Jr. commences his tirade against the prevailing order of prenatal care for fathers! The expectant mother gets all the attention, all the aids; but what does the expectant father get? Nothing! And why doesn't some one take him in hand, build up his muscles and give him sedatives for his nerves?

Mr. Guest presents such a convincing and convulsing picture of the gross neglect of 50 per cent of the parents all over the world that you simply must not miss it!

IS YOUR CHILD ALLERGIC? If he is, you will need to read the article by H. A. Slesinger, M.D., in next month's HYGEIA. He lucidly explains the picture of adult as well as infant allergy: what to expect and what to do about it. Allergy is fast assuming a place of importance in the medical management of a child. It can simulate and mimic several diseases, even appendicitis, and many mysterious symptoms may be accounted for when allergy tests are made on the child.

WHEN A WOMAN FACES 50 she has come to that period in her life when she undergoes another great physical change. And this change presents new problems about which she sometimes feels apprehensive and uncertain; often just the thought of them fills her with dread. Elmer L. Sevringhaus, M.D., brings these women a new message. No longer do women have to suffer certain difficulties of readjustment at the time of the menopause. Thanks to medical research, physicians frequently are able to help women to a comfortable passage through these traditionally hard years.

TO RESPOND TO A YOUNG WOMAN'S DESIRE not to wear glasses by saying this idea is merely "foolish vanity" is not a real solution of her problem. Conrad Berens, M.D., attempts to please this young woman without sacrificing medical precepts of scientific practice and shows how it may be done. It's an excellent article and answers understandably the question in its title, "Why Must I Wear Glasses?"

OTHER GOOD FEATURES will be "Accolade" by Philip Reichert, M.D.; "New Brains for Old" by Orvis C. Irwin; "The Family Helps the Spastic Child" by Belle McKinnon; "Summer Fare" by Harriet Morgan Fyler, and "Nervous Habits in Infants" by William I. Fishbein, M.D.

As they ate, some of the diners passed disparaging remarks on the quality of the ham they were served.

Mysterious Epidemics in History: V

***The Welbeck outbreak of food poisoning in 1880, as told by* CLAUDE LILLINGSTON**

AT THE TIME, the mystery of the outbreak of food poisoning at Welbeck, England, in 1880 was not satisfactorily cleared up. Indeed, the solution the medical authorities believed they had found was not quite correct. But thanks to their painstaking investigations and to the conscientious records made of them, it is now possible in the light of modern knowledge of the subject to reconstruct the problem as a whole and find the correct answer.

In June 1880, an important sale of effects was held at Wèlbeck, the property of the Duke of Portland. The sale lasted several days and attracted thousands of genuine purchasers as well as idle sightseers. Some of them came from afar, bringing their food with them. Others were less provident, and to meet their gastronomic needs, arrangements were made with the proprietress of a nearby hotel to feed them. She undertook to supply refreshments day after day during the sale. The drinks she sold consisted of bottled beer and beer on draft, spirits, ginger beer and lemonade. Bread and cheese, pickles and chutney were also provided. But the mainstay of her fare consisted of cold boiled ham, cold roast beef and cold beafsteak pie. The ham and the roast beef were not only served as such in slices but were also made into sandwiches. For a repast which was more or less of an emergency, the good lady seemed to have done herself credit.

As they ate, some of the diners passed disparaging remarks on the quality of the ham they were consuming. It seemed to them that it was badly cooked and that the fat was yellowish. Others remarked that it was greenish rather than yellowish, that it was too salt and that its taste was queer. Others, again, denied the ham that taste and flavor which are peculiar to a properly cured and cooked ham. The ham in some of the sandwiches tasted so badly that a mouthful was more than enough, the rest of the sandwich being disposed of surreptitiously or openly and contemptuously by other channels than the mouth.

The storm broke some twelve to forty-eight hours after this food had been eaten. There were nearly 100 victims; yet all but four escaped with their lives. In most cases the onset of the symptoms was as sudden as it was violent. The symptoms began in some cases with griping abdominal pain and nausea and in others with a chilled feeling and shivering, giddiness and faintness. Or there would be headache with general pains, which were soon confined to the abdomen. Following these preliminary symp-

One of the women who had waited on tables had appropriated some of the food and distributed it among her friends.

toms, there was vomiting, and acute diarrhea with colicky pains set in. The color of the loose and very offensive stools was dark, a distinctive feature about which more anon.

Some of the patients complained of severe cramp in the limbs, twitching of the muscles and tingling and numbness of the hands and fingers. As was to be expected after the vomiting and diarrhea, the patient suffered much from thirst, and the thick fur on his tongue stood out in marked contrast to its red tips and edges. The temperature was raised several degrees, and the pulse was rapid. Those who did recover felt weak and exhausted for several weeks, and those who died were ill for some six to seven days first, a fact of considerable importance to the doctors investigating the outbreak.

The circumstances surrounding it were so alarming that the British Local Government Board sent an expert, Dr. Ballard, to investigate it and employed Dr. Klein to carry out the necessary bacteriologic tests, which in those days were comparatively simple. At first it was feared that some acute specific fever had broken out. If it proved to be cholera, the situation would indeed be alarming. Reassurance followed on the heels of the inquiry. Cholera, it was known, might be responsible for a fulminating, catastrophic outbreak like this, but the stools of its victims are characteristically pale, rice-water stools; whereas in the present outbreak they were dark. Further, had the disease been cholera, about every other patient would have died, most of them within twelve hours of the onset of symptoms. In the present outbreak, the few patients who died lingered on for about a week.

But if the outbreak was not cholera, what was it? If it was due to some poison in the food served by the proprietress of the hotel, then the victims would assuredly be limited to those who had enjoyed her hospitality. But as the inquiry proceeded, it was ascertained that at least sixteen persons who lived in the neighborhood, yet had not attended the sale at Welbeck, had fallen ill in the same collectively dramatic manner. Probing tactfully but persistently into this mystery, the investigators learned that these sixteen persons had not after all been as independent of the hotel kitchen as it had seemed at first. One of the women who had waited on tables during the gigantic Welbeck picnic had appropriated some of the food she had been serving, had taken it home and distributed it among friends and neighbors. So, instead of invalidating the theory of mass food poisoning at Welbeck, they helped it.

The net of the inquiry having been drawn closer and closer around the hotel menu, each item of it was scrutinized with due suspicion. The drinks were soon dismissed as innocently uninteresting. So were the bread, cheese, pickles and chutney. The beef had been obtained from a local butcher who did his own killing, and there was nothing to suggest that it had deteriorated sufficiently between killing and eating to warrant its incrimination, although there had been an interval of about forty-eight hours between the cooking of the food and its consumption, a dangerously long interval at the height of the summer.

There remained the ham, to which unflattering reference has already been made. All the seven hams which had formed the mainstay of the hotel's fare proved to have been imported from abroad, six of them in the form of salted pork. The transition from salted pork to a cured ham had been effected by a series of simple devices. First it had been soaked for several hours in water to remove the superfluous salt. The meat had then been rapidly dried in a room heated by a coke fire. According to Scott, an artistic touch used to be given to this process of conversion by letting the hams hang for some time in a dark room to enable them to acquire a mouldy blue surface with a "bloom" temptingly reminiscent of that found on a genuine Cumberland ham.

These details may not be conducive to the peace of mind of the ham gourmet; but they give more than one clue to the mystery of the Welbeck outbreak. Somehow, at one stage in the checkered careers of one or more of these seven hams, there had been an invasion of the meat by poisonous germs. At first the hams were suspected of harboring what was then known as trichina and is now known as Trichinella spiralis, the parasite responsible for what is commonly called "measly" pork. The eating of such pork is liable to be speedily followed by diarrhea and vomiting and other signs of acute intestinal catarrh. It was, therefore, natural enough that this parasite should be suspected on the present occasion. However, it could not be found! Nor could any other parasite known at that time to the medical world. What Dr. Klein did find, both in the hams and in a kidney of one of the persons dying of the outbreak, was a certain bacillus with which he had hitherto been unfamiliar. His description of this bacillus and of its behavior under laboratory conditions shows, in the light of present day knowledge, that he had discovered a scapegoat and overlooked the real offender. It is, therefore, necessary to complete the jigsaw puzzle of the Welbeck outbreak by invoking the aid of knowledge acquired many years later.

Among the host of different germs which may invade meat are many which cause repulsive putrefaction but which are not really so poisonous, however objectionable the smell and the appearance of the meat may be. But there are certain germs, comparatively rare, known to belong to the Salmonella group and notorious for the havoc they cause in outbreaks such as that at Welbeck. Meat infected with the comparatively harmless germs of putrefaction may also harbor germs of the Salmonella group, for the conditions of moisture and temperature favoring the growth of putrefaction may also favor growth of the Salmonella group. But it sometimes happens that this most dangerous group is present in meat whose appearance does not suggest that anything is amiss.

Thanks to our present knowledge of the characteristic features of the germs belonging to the Salmonella group, investigations conducted in recent outbreaks of food poisoning similar to that of Welbeck have often ended in the isolation and identification of the germs of this group. When they have not been found, which is frequently the case, it is probably because the germs themselves have perished. But the toxins or poisons they have generated may still be present in the meat, for even the temperature of boiling water maintained for half an hour does not necessarily destroy them.

Almost certainly, some member of the Salmonella group of germs was responsible for the Welbeck outbreak. Perhaps one or two of the hams had belonged to a pig already infected during life with these germs. Or, at the other end of their travels, perhaps there had been some accidental infection between the cooking and the eating. The investigation did, indeed, show that as long an interval as two days had elapsed between the cooking and the serving of the hams, and during this interval they had been stored in a room communicating with the scullery, whose sink was connected with an untrapped drain leading to a public sewer. This sewer served the water closets of the whole neighborhood and was unventilated. While sewer gas cannot convey germs, the exposure of meat to its fumes is offensive. At night, the cooked hams had been kept in a room communicating with a stable. And all this in midsummer at a temperature which at times may have been ideal for the incubation of germs. What an unhygienic story those hams could have told had they been gifted with speech!

The lessons of this outbreak? One was this: that the strength of a chain is in its weakest link, and that in the long chain leading from the live pig abroad to the cooked ham at home there had been ever so many links. Carelessness and stupidity in the forging of any one of them might have stultified all the care taken with every other link. Another lesson was the revelation of the insanitary state of the buildings and drains of Welbeck. Possibly they were not to blame in this particular instance, but even if this were so, the suspicious scrutiny they underwent led to the exposure of their sins and their adequate punishment.

[NOTE.—Next month Dr. Lillingston will tell about an outbreak of scarlet fever in 1885 which was due to milk.]

—For Service to Humanity

By JACK SELLERS

Senator O'Mahoney greets Dr. Emory Lee Jewell (right) and Mrs. Jewell.

RECOGNITION of a lifetime of service to the cause of humanity came to Emory Lee Jewell, M.D., of Shoshoni, Wyo., the night of last April 11. On the occasion of the annual banquet meeting of the Casper, Wyo., Chamber of Commerce, he was presented with the Kiwanis Distinguished Service medal. Out of the entire population of Wyoming, Dr. Jewell was selected as the citizen felt to have contributed the most to his community, state and fellow men. The award is sponsored by the Casper Kiwanis club.

The presentation, by former District Judge Robert R. Rose of Casper, was cheered by an audience of 800. They gave the blind physician a standing ovation. In the accompanying photograph Senator Joseph C. O'Mahoney of Wyoming is seen warmly congratulating Dr. Jewell.

Researches by Dr. Jewell, who had occasion to treat a number of cases, were among the first which successfully resulted in identification and isolation of the Rocky Mountain spotted fever virus. It is known locally as "tick fever" because propagation of the disease has been traced to certain ticks infesting areas grazed by sheep. This infection frequently is fatal; but the medical profession reports that the mortality rate has been reduced materially in recent years due to the antitoxic serum which has been developed.

Senator O'Mahoney, in delivering the keynote address of the meeting, paid eloquent tribute to Dr. Jewell and adapted his line of thought to the inspiration provided by the occasion.

"His greatest service," the senator said of the physician, "was that he was loyal to humanity. Here we realize the greatest contribution a man can give in his lifetime is help to his fellow man. A man can well go penniless to his grave if he has served his fellow man."

Dr. Jewell's voice trembled with emotion as he acknowledged the highest tribute the citizens of Wyoming could pay him. It rang with sincerity and earnestness as he told of his gratitude to his wife and daughter for all they meant to him and had done for him; as he related how thankful he was for the years of service he had been able to give his neighbors in a widely scattered rural area of central Wyoming. His daughter is Isabel Jewell, the screen actress.

Shoshoni is a village on the Yellowstone highway. A youthful physician, with his career yet to make, Dr. Jewell arrived there thirty-five years ago on a vacation trip. His intention was to visit Yellowstone National Park, but he failed to make it before the park closed. And then he met the shy, beautiful 16 year old girl, who later became his bride. He loved her, and he loved this strange, raw western country in which he found himself.

These and other memories were recalled by Dr. Jewell as he acknowledged the award. In his own words, he called himself penniless, a man whose career was well on the wane. But he had no regrets, he said. Among the happiest recollections of his life were those of the children he had helped bring into the world.

Six years ago his eyesight suddenly began to fail, and within a few months he was blind. But he is beloved by all in his community for his sunny disposition, his personality and the thoughtfulness with which he continues to regard his neighbors, most of them patients at one time. Even in his retirement, in his "house by the side of the road," a landmark in Shoshoni, they persist in coming to him with their troubles and to ask advice. Any of them will tell you of his kindliness, of his courage and of his humanity.

Too Good for His Own Good

"The squeaking wheel gets the grease," and this applies to children as well as to carriages,

says MOTIER HARRIS FISHER

WOULD YOU be shocked, I wonder, if you were to hear it bluntly stated that no parent should desire a "good" child? Well, that is exactly what I am about to say, for the good child is so often the underprivileged, the neglected, the forgotten child. When Mary comes home from school month after month with a "C" average on her report card and a perfect mark in behavior, it is time for her parents to sit up and take notice. When Mary's teacher exclaims repeatedly that she is "such a good quiet little thing," it may not even then be too late to do something about it.

Nine times out of ten the child considered unusually good by parents and teachers is merely the one who causes them least trouble and, because he troubles no one, is generally neglected. Wasn't it Benjamin Franklin who said, "The squeaking wheel gets the grease"? That old adage applies as well to children as to wheels, for the normal child will do a considerable amount of squeaking, and if he doesn't do any, is likely to be cheated of the grease he needs for smooth running.

Watch out for that good child who sits meekly in his corner, fearful of making the slightest move that might disturb any one else. Watch out for the child who is always trying to please some grown-up, who seldom follows a childish impulse, who demands nothing and therefore receives less than his due. His life is a negative one. The normal young animal is full of impulses to action and to conflict; he is urged by curiosity and interest and hunger into many disturbing activities. These impulses are nature's drive to growth and experience, and the child who is led by circumstances to deny these forces too completely or too early is robbed of full development, for they are the strongest incentives to education.

A fire engine comes down the street, "Cling-clang! Cling-clang!" All the children in the fourth grade schoolroom stand up impulsively, hoping to catch at least a fleeting glimpse of the enchantment—that is, all except Billy, who is a good little boy. He remains quietly seated, for he knows that the teacher prefers order, and he must live up to his reputation of best boy in the class.

A new kind of problem in arithmetic is introduced by the teacher. Billy doesn't quite understand the solution; yet he hesitates to ask questions, for many others are clamoring for attention. He holds up his hand timidly, but the teacher is busy trying to satisfy the more eager ones first. Then the period ends, and Billy goes home another day without a sense of progress. Little by little, day after day, the more aggressive children forge ahead of him. They may even have less native intelligence than he has, but they are the squeaking wheels who must be quieted for the sake of peace; and because they are more demanding, they receive more of the things they need.

It is the same at home. Mother and Father have learned that Billy can wait a day or two for his allowance. Sometimes they even forget to pay him, for Billy doesn't know what to do with the money, anyhow. Young Brother always has a dozen projects waiting. He wants a new ball mit, a tail light for his bicycle, money for his club dues, a subscription to a mechanics magazine. He would like a dog, too, or a couple of guinea pigs. My goodness, what that boy doesn't want! And, somehow, by using expert boy psychology on his parents—psychology mixed with wheedling and considerable charm—he gets most of his heart's desires. What is more important, he gets the development that comes along with them—that out-of-school education that is so important for a boy. In the meantime, poor, timid Billy can't even find any heart's desires, at least not any which are urgent enough for him to make a fuss about. He now contents himself with daydreams and the reputation for being good, which has slowly grown up around him, smothering his natural drives.

"Billy is a peach," says his mother. "Such a comfort to have one child who is willing to give way, who isn't always needing something and can be found when you want him. If both my boys were like Billy, life would be so easy!"

Would she honestly like to have both sons shy and retiring, content to be neglected bystanders, just for the sake of her own perfect peace? Not unless she is more selfish than most mothers. The fact is that mothers are known to hold their wayward sons especially dear. The proverbial sower of wild oats found a warm place in his mother's heart, not because he sowed wild oats, of course, but because he usually had enough vitality to struggle for a richer life than convention was always ready to grant. He had force and therefore charm, which the other sons lacked.

The tragedy of the good child is that goodness is so frequently his only reward, and it becomes in time a little sour. A "holier than thou" attitude does not bring life's deeper satisfactions. The good child is always in danger of waking up some morning to the discovery that his goodness has become a denial of life itself. He may find that he has cheated his natural impulses so often that he no longer knows what he wants; no longer wants anything perhaps. And the person who has no strong desires is only half alive.

Well, then, shall we set out to make our sons and daughters as bad as possible in order to avoid the danger of their becoming too good? Shall we encourage them to be selfish, to be spendthrifts, to defy teachers and parents, to shove every one else out of the way in order that they may reach their goal?

No, of course not. Children have to learn that it is necessary to give way, that this is a world of compromise; and they do learn it, never fear. All healthy, normal babies are born princes and princesses. The beating-down process begins early, however, and continues until most of them inevitably become serfs willing to follow without question. It is the exceptional person who arrives at adulthood with self confidence whole and unshaken. This is a great pity, for strong character is built only on a foundation of self belief, self belief with which every boy and girl is well endowed by nature but which gradually slips away under pressure.

The process of rebuilding self confidence, once it has been lost, is a slow and painful one. It is better to cherish it in the first place. Parents might well remember that in the great forest the little shrub has a hard time finding enough sun in which to grow. The large, strong trees tend to overshadow and cramp the tender young plants. If we rob the young of their ability to assert themselves in their early years, they may never be able to push through to the sunshine.

The normal young animal is full of impulses to action and to conflict.

The tragedy of the good child is that goodness is so often his only reward.

They are the squeaking wheels who must be quieted for the sake of peace; so they receive most of the teacher's attention.

Correctly speaking, there is no such thing as a good child or a bad child. Strangely enough, the tiny infant is often known as a "good baby" if he does not cry much. Sometimes the fact that he is quiet is due to weakness, for normal babies do cry and should cry when they are hungry or uncomfortable. And just as the infant's lusty cry is welcome proof of strength and force, the healthy demands of the older child are also good signs. They are signs of curiosity, interest, urges to activity and the capacity for getting something out of life. The robust youngster does not always fit meekly into the pattern laid down for him by his parents or his teachers, for the simple reason that the pattern is sometimes miscut and does not follow the lines of his nature. For each child is an individual with his own peculiar temperament and his own peculiar needs that may differ from those of his own brothers and sisters.

Why expect children to be either good or bad? Is it fair to judge them by adult standards? If a child is healthy and happy, if he is developing according to his nature, he will be neither good nor bad: He will just be himself, thriving as best he can under the conditions we have provided. He will follow the natural laws of growth in much the same manner as does a young calf or any other young animal. That means he will often kick up his heels in sheer good spirits. He will insert his curious little nose into some of the wrong places. He will be underfoot at inconvenient times and gone like the wind when you need him most desperately. He will wear out his shoes and lose his cap, gloves, sweater and sometimes his shirt as well. His manners will frequently revert to those of the young savage. His responses will be as uncertain as the weather. For he has his own destiny to work out, and he is urged on by forces which he does not understand. Parents will put on the brakes occasionally in self defense, for they, too, have to live. But block his way entirely, and you have meddled in that destiny; you have impaired his chances of self fulfilment. Clip his wings too often or too closely, and you must be prepared if he never again learns to soar.

It is an easy thing to clip their wings, dampen their spirits, rob them of confidence until they become "good children"—far too easy. It is, in fact, the line of least resistance and hence the refuge of the lazy parent. The stern disciplinarian has frequently prided himself on his rule of iron, but he has no real cause for pride, for it has always been easier to rule with an iron hand than to take the time and trouble to find the reason for a child's wrong behavior and remove it. Stern discipline is an easy substitute for understanding. It is quicker to administer punishment than to find out the cause of the difficulty and remove it. It is much more convenient to turn a child into a creature of your will—one who lends himself fearfully to your every mood—than it is to draw aside a little so that the tender young plant may have his fair share of the sun.

"What do you want *this* time, Ned? Can't you see that I am trying to read the paper? Straighten up those shoulders! You're getting to be a regular hunchback. Well, well, speak up, can't you; what do you want?"

"I'm sorry, Father, but you are sitting on my science magazine; I wanted to show it to Charlie. I—I'm sorry I disturbed you."

"Oh, here it is. I'm sorry myself. I was a little worried this evening. Guess I was too impatient. In fact I know I was downright rude. You'll have to make allowances for the old man. Tell Charlie to come over after supper, and we'll have a game of baseball."

The give-and-take of life—can we not include children, too? Is there any reason why common courtesy should not extend to our own as well as to the passing stranger? Is there any reason why the ordinary rules of respect for the opinions of others should not apply equally to children?

Successful parents are not born; they are made, and they usually make themselves. The most successful mothers and fathers will not be parents of children who are so good that one would hardly know they were in the house; so good that they never make trouble for any one, never demand anything for themselves. I am inclined to believe that the most successful parents are those who can see that the laws of politeness, kindness and courtesy must work two ways. They have learned, too, the value of praise, of humor, of cheerfulness, of good will. They are fully aware of the destructive powers of fault finding, sarcasm, scolding and anger as means of control.

There are five indispensable qualities which the parent of this age is cultivating: understanding, sympathy, patience, insight and love—understanding of child nature; sympathy with the child's point of view; patience with the child's limitations; insight into the causes of the child's behavior; love for the child. These are primary requirements for successful parenthood, and every one of them may be acquired. The children of parents who have acquired them will be neither good nor bad; they will be delightful instead and successful in their own right in a world of childhood.

New Treatment for PELLAGRA

Today, the victims of this dietary disease may receive the benefits of a medicine that is the result of two hundred years of study, says **GUNVOR JOHANNESEN**

The rod and serpent of Aesculapius, the mythologic god of medicine, typify the science of medicine. The knots of the rod symbolize the difficult problems of Medicine; the serpent typifies wisdom. The Aesculapius symbol therefore stands for power, wisdom and health.

TWO HUNDRED YEARS of work in laboratories, in hospitals and in experiments with suffering humanity have led to a solution of the problem of finding a cure for pellagra. Doctors who formerly faced the dread peril with helplessness now merely give the patient a dose of nicotinic acid and confidently wait for improvement.

Pellagra is a disease in which there is scaling and peeling of the skin, general weakness and at times convulsions. Nervous symptoms such as melancholia are also frequent. There are digestive disturbances and spinal pain noted by many patients.

Although pellagra was known in Spain as early as 1735, it was not until 1914 that scientists satisfactorily determined that it was a dietary rather than a communicable disease. Blood tests and inoculations disproved the infection theory.

In a study made at two orphanages at Jackson, Miss., in 1914, Dr. J. Goldberger proved that pellagra could be prevented by proper diet. He added an increased supply of milk, eggs, fresh meat, beans, peas and oatmeal to the diet of those children in whom there was a high incidence of pellagra, with the result that there were no further pellagra outbreaks for a year. Formerly there had been seventy-nine cases recurring regularly every spring and summer.

Before this study was made, it was believed that the tendency of the disease to recur year after year about the same season was explained by the agency of a parasite presenting definite alternating periods of latency and activity. Dr. Goldberger, however, concluded that the recurrences were caused by a change in diet due to the changing seasons.

The same year Dr. W. F. Lorenz made a similar study in a ward of Negro women in Georgia State Sanitarium. These patients suffered from a confused and apprehensive mental condition, complicated by delusions and defective memory. They were treated with a generous diet of eggs, fresh beef, potatoes, green vegetables, bread, milk and coffee and given complete rest. After four weeks, the mental and nervous symptoms began to disappear, bowel conditions improved and weight increased. The skin lesions were last to change.

The Rankin farm experiment in Georgia in 1915 proved conclusively that diets deficient in mineral ingredients, proteins and vitamins would produce pellagra. The plan involved restricting perfectly healthy men to a diet similar to the one furnished by the institution where pellagra had been endemic [particularly prevalent in this locality] and where it had been relieved by diet changes.

A pardon was promised at the end of the study to any of the healthy men in the prison who would volunteer for the experiment. Twelve men offered themselves, and eleven actually took the test. White male adults were chosen because they appeared least susceptible to the disease in districts where it is most likely

to occur. The experimenters proposed to bring about the disease in August or September when its incidence was normally on the decline. Consequently the men were placed on the experimental diet from April 19 to October 31.

The subjects were under guard throughout the experiment to keep them entirely protected against exposure to pellagra. Thirty control subjects, six of whom had histories of the disease in their families, were fed a balanced diet under ordinary conditions. The experimental group was fed meals deficient in milk, animal proteins and dried peas and beans; but the meals were high in fat pork, molasses, corn meal, starch and green vegetables. The two groups had the same amount of fats and carbohydrates.

At the end of five and one-half months, six of the eleven volunteers developed definite pellagrous skin symptoms. Other manifestations included nervousness, gastric discomfort, weakness, headaches and exaggerated knee jerks. The difference in symptoms led the experimenters to believe that pellagra is probably not a single entity but includes at least two syndromes [different sets of symptoms] which are commonly associated but the causes of which are essentially distinct. One is the complex "pellagra sine pellagra," in which the characteristic skin eruption is absent, and the other is the dermal complex, or pellagra with the eruptions and only slight other manifestations. Among the volunteers, one subject lost markedly in weight but showed no eruptions, while another lost no weight but had eruptions.

From the standpoint of prevention, these experiments were of the greatest importance. They established that pellagra is caused by faulty diet and that the type of diet which is concerned in its cause is derived largely from milled cereals, tubers, molasses, sirup and fat pork. It seemed proved that the inclusion of a liberal amount of milk, lean meat, eggs and leafy vegetables in the diet prevented the disease.

However, pellagra remained an unsolved problem. Certain portions of the population found it impossible to afford the foods that prevented the disease. In 1932, Dr. Tom Spies, University of Cincinnati, went to work on pellagra. To a generous diet of milk, eggs, fruit and lean meat, he added portions of yeast and calves' liver. In the meantime, Conrad A. Elvehjem, professor of biochemistry at the University of Wisconsin, had been working with dog pellagra, otherwise known as black tongue. It was in his laboratory that science unearthed the secret which was the answer to the problem. After tireless experiments, using liver extract, he finally succeeded in isolating the substance, nicotinic acid amide, which has since been used in the treatment of hundreds of cases of pellagra with miraculous results. The discovery was announced in the *Journal of the American Chemical Society* for September 1937.

Symptoms do not reappear while patients receive nicotinic acid, despite the fact that they eat a pellagra-producing diet. Its value as a prophylactic, or remedy, in cases of acute pellagra is firmly established; it rapidly clears up the raw mucous membrane, and the redness and swelling disappear almost immediately. Furthermore, it jolts its victims back to clear-thinking consciousness.

However, severe cases which have gone beyond certain limits of skin eruptions and mental weakness do not appear to be specifically benefited by this new remedy. Here again is evidence that pellagra is a multiple disease. Nicotinic acid will not cure the neuritic symptoms. In fact, it has in a few cases increased the peripheral neuritis [inflammation of nerve endings] which often accompanies the disease. Neither will it eradicate the patches of scaly skin. Good diet or some undiscovered factor in good diet does this.

Therefore, the problem of supplying the poor families, especially in the southern mill towns, with a health-giving diet remains unsolved. Statistics show that raised standards of cleanliness and comfort have caused sacrifices in the diets of lower income families. When wage levels were lowered, the cost of living remained the same in the South, and hundreds of families were forced to give up the foods which they imported from other sections of the country. Sacrifices in variety, quantity and quality of food followed failure of family incomes to keep pace with food prices. The fact that the prices of meat and animal proteins increased about 40 per cent more than those of carbohydrates intensified the maladjustments in diet.

When such reforms in the diet can be brought about that will provide the necessary elements over a prolonged period, pellagra may confidently be expected to disappear. Meanwhile, doctors in pellagra stricken areas need no longer look on helplessly while patients, suffering severe pain, beg for relief. The new remedy, nicotinic acid, which is commercially manufactured from nicotine, can be administered cheaply and easily through convenient methods of distribution. Only recently a relief ship carried a quantity of it to the stricken areas in war-torn Spain. Grateful patients, at least in the milder stages of pellagra, can definitely be restored to health and happiness.

HEALTHGRAMS

FROM ARTICLES IN THIS ISSUE

¶The function of the dentist is not only to treat and correct dental diseases and malformations, but he also fits into the scheme of preventive medicine by being always on the watch for mouth symptoms of general disease. *See page 618*

¶Without being so "fussy" as to make himself miserable, the motorist should keep in mind that all the pleasures and benefits of a vacation can be nullified by a subsequent illness or infection. *See page 590*

¶If you must use your nose at all for breathing while in the water, learn to exhale through the nose when in contact with the water. *See page 594*

¶Olive wreaths are often more deserved by the physically handicapped than by those who are in perfect health. *See page 597*

¶Great deeds may make a noise in the world; but that is only because a great force strikes an obstruction in its path and overthrows it. *See page 604*

¶Exactly the same precautions as those taken in a stationary kitchen should also be taken in the kitchen that is mounted on wheels. *See page 608*

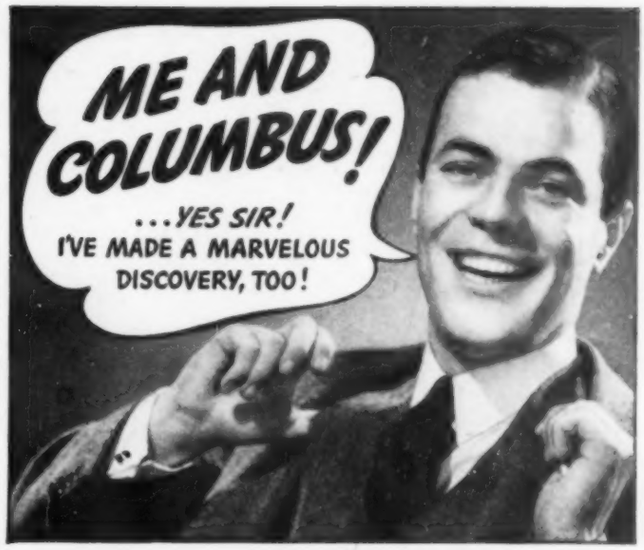
¶Frequent exercise, gradually increasing in severity and duration is the best way to train a good functioning heart. *See page 625*

¶The good child is always in danger of waking up some morning to the discovery that his goodness has become a denial of life itself. *See page 636*

¶Two hundred years of work in laboratories, in hospitals and in experiments with suffering humanity have led to a solution of the problem of finding a cure for pellagra. *See page 639*

¶In a varied diet, which includes fresh vegetables and fruits, there is an ample supply of minerals and vitamins for proper nutrition. *See page 648*

¶More boys than girls have the thumb-sucking habit. *See page 660*



SAM: All right, Chris, let's have the low-down! I've been wondering what made you so chipper lately!

CHRIS: The finest-tasting breakfast cereal you ever put in your mouth, Sam—Post's 40% Bran Flakes! They're selling at a new low price now—and I learned a few months ago Post's Bran Flakes are not only mighty fine eatin'—they also give you *two extra benefits* . . .

FIRST, Post's Bran Flakes provide just enough bran, a *natural* regulator, that helps protect you against sluggishness. People whose systems are irregular, due to lack of bulk in the diet, find Post's Bran Flakes, eaten daily, a wonderful help.

SECOND, Post's Bran Flakes are rich in phosphorus. They are a rich food source of iron, and a good source of Vitamin B_1 —an essential for maintaining good appetite . . . And today, Post's Bran Flakes come to you at a NEW LOW PRICE!

SIX MONTHS LATER . . .

SAM: You sure were right, old man —I've been eating those swell-tasting Post's Bran Flakes every morning for six months, and believe me, I never felt better in my life!

CHRIS: You said it, Sam! It's a great thing to find a cereal that tastes so *good* and gives you important *extra benefits* as well!

IMPORTANT: Post's Bran Flakes, due to their bulk, are a *regulative* cereal. Constipation due to insufficient bulk in the diet should yield to Post's Bran Flakes, eaten regularly—as a cereal or in muffins. For cases not corrected in this simple manner, a physician should be consulted. Post's Bran Flakes are a Post Cereal—made by General Foods.

"HEY JOHNNY! come on over"

And heedless of traffic, Johnny darts across

Children may be thoughtless . . . but much can be done to make streets and highways safer for them. Supervised playgrounds, recreation centers, proper traffic control and driver education are some of the activities which many communities have found helpful.

In addition, parents can teach their children the necessity of good safety habits. Some of these should become almost instinctive. Children should—

Look left, then right, and if the road is clear *walk* across.

Obey the traffic lights.

Never step into the street from behind a parked automobile.

Keep to the left, facing the oncoming traffic, when walking along a country road.

Never run into the street or play in the roadway.

Motor accidents, drownings, the careless use of firearms and other mishaps will claim 20,000 young lives this year—many of them during the summer months . . . unless the children themselves know and practice the common rules of safety.

Not all accidents happen outdoors. Home accidents cause almost as many deaths and serious injuries among children as street and highway mishaps. If unsafe conditions, which might cause accidents, exist in your home, removing them *now* may save you days or years of regret.

Safety Begins at Home

The Metropolitan booklet "How Safe is Home?" tells how to find the places where home accidents most frequently occur and how to guard against them. "Swimming and Life Saving" and "The Junior Safety Volunteer" are two other booklets that will help you teach your child to live safely. A post card will bring you all or any one of these free booklets . . . or use the coupon. Send for them today.

METROPOLITAN LIFE
INSURANCE CO., Dept. 739-Z
1 Madison Ave., New York, N. Y.

Please send me, free, the booklets checked:

☐ "How Safe is Home?"
☐ "Swimming and Life Saving"
☐ "The Junior Safety Volunteer"

NAME.....

ADDRESS.....

CITY.....STATE.....

Plan to visit The Metropolitan's Exhibits at THE NEW YORK WORLD'S FAIR *and* THE GOLDEN GATE EXPOSITION IN SAN FRANCISCO

METROPOLITAN LIFE INSURANCE COMPANY

FREDERICK H. ECKER, *Chairman of the Board*
LEROY A. LINCOLN, *President*
ONE MADISON AVE., NEW YORK, N. Y.

Copyright, 1939, by Metropolitan Life Insurance Company

MORE BOY BABIES IN POSTWAR YEARS

Following a long war a definite increase in the proportion of male births has repeatedly been observed, it is pointed out in the *Statistical Bulletin* of the Metropolitan Life Insurance Company. This was, for example, the experience of nearly all the principal European countries engaged in the World War.

Various theories have been advanced in explanation of this phenomenon, but few of them stand the test of thoughtful analysis.

Among these theories, the one that seems most plausible relates the increased ratio of male births to the increased proportion of first births occurring as the result of the consummation of marriages that had been postponed by men called to the front.

Such an effect, insofar as it corresponds to reality, would be connected with the influence of the age of the mother on the sex ratio of the infants born, for first births occur in the majority of cases among young mothers, as the article shows. The ratio of males to females at birth diminishes as the age of mothers increases. This is especially evident in the case of our native white women, with whom the relative surplus of boy babies shows a consistent decline with advancing age of the mother. After age 34 the proportion of boy babies born is appreciably less than for younger mothers.

At the first outbreak of hostilities the young male population is drawn for service into the armed forces at the front, and it is this vigorous body of young men that forms the bulk of the fighting forces throughout the war. Consequently, during hostilities, the young women of warring nations are largely prevented from bearing children either through the absence of their young husbands in the army or because no eligible young bachelors are at home for them to marry. Accordingly, so it is reasoned, most babies in wartimes are borne by the older married women, with whom boy babies are relatively less common. With the return of the young men at the end of the war, there is a marked increase in marriages and births; and since these are predominantly among young adults, it is only natural that the ratio of boy babies should show a decided rise after a war.

The Years Ahead ?

Will they be filled with vital, joyous living? Will mental alertness, emotional stability, physical fitness be maintained at forty-five? At fifty-five? Down all the years until the course of life is run?

The most important factor in successful living, at any age, is health. And, on such significant health questions as diet, exercise, work, rest, recreation, sleep and social adjustments, Hygeia, The Health Magazine, gives definite help. It deals with problems of maternal welfare; child care and training; marriage difficulties.

Hygeia constantly presents, in well-selected, timely articles, a record of the progress which medical science is making in the prevention and cure of disease. Its authoritative information helps to dispel unfounded fears and promotes intelligent cooperation with the family physician. If you are not already receiving the magazine, why not send in a trial subscription?

Some Comments from Readers of HYGEIA

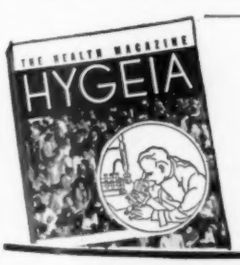
"I am glad to renew my subscription to HYGEIA because it is read by all the family and loaned to friends. It's a magazine that every one is interested in."

• •

"Because we do not care to take more periodicals than we can read regularly we choose of them all a few which we consider to be the most worth-while and most valuable to a family. HYGEIA is one of them."

• •

"A splendid magazine which should be in every home especially where there are children."



SPECIAL INTRODUCTORY OFFER—SIX MONTHS FOR $1.00

Hygeia 7-39

American Medical Association
535 North Dearborn Street, Chicago

Enclosed is $1.00 for a six-months' introductory subscription to Hygeia, The Health Magazine. (Regular price $2.50 a year.) I am a new subscriber.

Name .....

Address .....

LOOK— PINEAPPLES!

Patty has just discovered her favorite fruit on the Dole map of the Hawaiian Islands.* But she was just a baby when she discovered how good Dole Pineapple Juice is. Although Patty lives in Hawaii where the pineapples grow, it's just as easy for you to get real Dole Pineapple Juice as it is for Patty. So find out for yourself how delicious it is.

*Don't *you* want a map like Patty's with its fascinating colored pictures? You can have one by sending your name and address and 10 cents in coin or stamps to the Hawaiian Pineapple Company, Ltd., San Francisco.

MOTHERS: PURE, NATURAL, UNSWEETENED—RICH IN FRUIT-ENERGY —THERE'S HEALTH AND PLEASURE GALORE IN EVERY CAN OF DOLE PINEAPPLE JUICE FROM HAWAII

Copyright 1939, by Hawaiian Pineapple Co., Ltd.

SELECTING A CAMP

Parents are handicapped in intelligently selecting the proper camp for their children. They do not have sufficient information concerning the real educational values of camp, the benefits that normally should be derived and the standards that define a good camp. Secondly, they have no adequate means of applying any criteria they might possess to the camp under consideration. To aid in meeting this problem Max J. Lorber has compiled a pamphlet incorporating the information parents should have when selecting a camp. It is entitled "How to Choose a Camp." Some of the points he mentions are these:

Foremost is the matter of health and safety. What precautions does the camp take for preventing accidents, disease or illness and for safeguarding the sanitation and handling of food?

Second, the type of counselors who will have charge of the children is important. The camp is just as strong as the counselors in it. This is the most important standard of all, for a good counselor will not only care for the physical needs of his charges, but he will develop their character and personality.

Third, beware of the "quack" among camp directors! Be sure his educational qualifications, his experience and the degree of his financial success in camping recommend him for the custody of your child. Does he welcome parents' visits to his camp?

Fourth, will each camper have the status of an individual, or will he be regimented into the group personality? Behavior problems are individual and should be treated so, aside from the application of the common disciplinary measures. Then too, there should be individual guidance for each camper.

The fifth concern is the camp's program. Here the motivation in its participation, the balance of interests, the democracy in its procedures are all important points to consider.

The last question in Mr. Lorber's criteria is "What is the morale or spirit of the camp?" Camping to boys should be interpreted in terms of fun. Camp should be a happy, joyous community of boys or girls who are seeking together to make their camp life more enjoyable.

FRUIT JUICES

When summer comes, tall cool drinks are just around the corner. Let them be nutritious as well as refreshing

JULY is a good month to dwell on the merits of fruit juices. Sipping slowly on a tall glass of cold fruit juice tinkling with ice is one way to cool off in the good old summer time. Fruit juices are not only refreshing beverages but are nourishing foods as well, and they contribute essential nutrients to the diet. The Council on Foods of the American Medical Association has accepted a number of brands of commercially canned fruit juices including orange juice, lemon juice, grapefruit juice, pineapple juice, grape juice and a few other fruit juices.

Canned orange, lemon and grapefruit juices and pineapple juice are considered to be excellent sources of vitamin C. Canned orange juice is a little more than twice as potent in vitamin C as canned tomato juice. Canned grapefruit juice has a vitamin C potency only slightly less than that of canned orange juice. Canned pineapple juice is about one third as potent in vitamin C as canned orange juice.

Vitamin C is readily destroyed by oxidation and heating. It is significant that the citrus fruit juices are acid in reaction. In this type of medium it has been found that the vitamin C activity is retained much better than in a neutral or alkaline medium. Commercially canned fruit juices have been shown to contain appreciable quantities of vitamin C when precautions have been taken to prevent the destruction of the vitamin during the canning process. In general, the conservation of the vitamin C is accomplished by raising the temperature of the juice rapidly, in order to drive out dissolved air and to destroy the "oxidase" which destroys vitamin C. Further conservation of vitamin C is made possible by performing the canning operations under reduced pressure or in an atmosphere of steam.

Other factors that affect the vitamin C content of fruit juices are the variety of fruit, the conditions under which the fruit has been grown and the degree of ripeness. There probably is some loss of vitamin C of canned juice even when they remain in the unopened can.

In 1937 the Council on Foods had the vitamin C content of accepted fruit juices determined, and

Texsun

GRAPEFRUIT JUICE

presents

"303 Thrilling CITRUS FRUIT Recipes"

Free!

Something new . . . absolutely different . . . original! 303 unique recipes for entrees, garnishes, breads, desserts, salads, appetizers, festive dishes, et cetera. Nothing like it in America today! New, delightful thrills for every menu! And they're yours free! Merely buy three cans (any size) of the famous Texsun Grapefruit Juice. Then tear off and mail the labels to us with 25c in coin to cover postage and handling. A copy of this handsome, 80-page, beautifully illustrated book will be mailed promptly. If your food store cannot supply Texsun, in place of the labels send the store's name and address, together with this advertisement and 25c.

America's Sweetest!

Texsun Grapefruit Juice is even more thrilling than the recipes. One sip of its pure, natural goodness—and you'll know why millions acclaim it America's Sweetest! For Texsun is not just a palatable grapefruit juice. It's a wholesome, luscious delight to the palate at any hour or occasion! The marvelous flavor of the fresh fruit is developed and mellowed in 250 days of sunshine. And only the choicest of the famed Texas grapefruit crop are mechanically squeezed into the Texsun cans. If you've ever tasted a Texas grapefruit, you know what that means! Keep several cans handy in the refrigerator and serve Texsun. It's always appropriate and welcome!

H 739

RIO GRANDE VALLEY CITRUS EXCHANGE

WESLACO - - TEXAS

as a result of this study it was found that one cupful (12 ounces) of canned lemon juice contained about 2,500 units of vitamin C; orange juice, 2,250; grapefruit juice, 1,875, and pineapple juice, 750. The usual requirements for vitamin C in the adult is about 600 to 1,000 international units of vitamin C daily. It is good practice to serve an 8 ounce glassful of fruit juice at breakfast and at dinner.

ACCEPTED FRUIT JUICES

The following brands of canned fruit juice stand accepted by the Council on Foods as of June 1, 1939, and are distributed by the manufacturers, who are privileged to use the acceptance seal:

Church's Concord Grape Juice
Martinelli's Gold Medal Concord Grape Juice

Ariz-Sweet Grapefruit Juice
Ariz-Sweet Grapefruit Juice Sweetened
Bruce's Grapefruit Juice
Bruce's Grapefruit Juice Sweetened
Commander Grapefruit Juice
Dromedary Grapefruit Juice
Dromedary Grapefruit Juice Sweetened
Floranda Grapefruit Juice
Gainsborough Grapefruit Juice Sweetened
Garth Grapefruit Juice Sweetened
Garth Grapefruit Juice
Gold-Pak Grapefruit Juice Sweetened
Gold-Pak Grapefruit Juice
Kingsbury Grapefruit Juice
Kingsbury Grapefruit Juice Sweetened
Dr. P. Phillips Grapefruit Juice Sweetened
Texsun Grapefruit Juice

Hulburt's Lemon Juice
Stephens Lemon Juice
Treesweet Lemon Juice
Valora Lemon Juice

Absopure Orange Juice
Commander Orange Juice
Dromedary Orange Juice Sweetened
Golden Bear Orange Juice
Hulburt's Orange Juice Sweetened
Libby's Orange Juice
Dr. P. Phillips Orange Juice Sweetened
Stephens Orange Juice
Treesweet Orange Juice
Valora Valencia Orange Juice

Bruce's Orange and Grapefruit Juice Sweetened
Dromedary Orange and Grapefruit Juice Sweetened
Kingsbury Orange and Grapefruit Juice Sweetened
Dr. Phillips Grapefruit and Orange Juice Sweetened

Diamond Head Pineapple Juice
Dole Pineapple Juice
Greetings Pineapple Juice
Honey Dew Pineapple Juice
Libby's Pineapple Juice
Paradise Island Pineapple Juice
Sweet Treat Pineapple Juice

The following brands of canned fruit juices stand accepted by the Council on Foods as of June 1, 1939, and are distributed by firms which purchase the products from manufacturers who are privileged to use the acceptance seal:

Iris Grape Juice
Solitaire Grape Juice

Cellu Grapefruit Juice
Good Morning Grapefruit Juice
Hale's Pride Grapefruit Juice
Nutradiet Grapefruit Juice
Red Ribbon Grapefruit Juice
Sanitarium Grapefruit Juice
Sweet Life Grapefruit Juice
Sweet Life Grapefruit Juice Sweetened
Treefresh Grapefruit Juice

American Lady Orange Juice
Cellu Orange Juice
Del Ray Orange Juice
Edelweiss Orange Juice
Florida's Orange Juice Sweetened
Golden Tap Orange Juice
Good Morning Orange Juice
Hale's Pride Orange Juice
Iris Orange Juice
Pickwick Orange Juice
Sun-Blest Orange Juice
Sweet Life Orange Juice Sweetened
Topmost Orange Juice

Cellu Juice-Pak Pineapple Juice
American Lady Pineapple Juice
Aunt Nellie's Pineapple Juice
Bonnie Pineapple Juice
Boswell's Pineapple Juice
College Town Pineapple Juice
Colonial Pineapple Juice
"Drink Me" Wonderland Pineapple Juice
Ecco Hawaiian Pineapple Juice
Edelweiss Pineapple Juice
Fairway White Label Pineapple Juice
Flagstaff Pineapple Juice
Fort Hamilton Pineapple Juice
Fort Western Pineapple Juice
G & B Pineapple Juice
Good Morning Pineapple Juice
Gross Pointe Pineapple Juice
Happy Hour Pineapple Juice
Haserot's Pineapple Juice
Homespun Pineapple Juice
Johnson's Bestovall Pineapple Juice
Keyco Pineapple Juice
Lehmann's Pineapple Juice
Leslie Pineapple Juice
Liquid Sunshine Pineapple Juice
Loeb's Pineapple Juice
Lucky Boy Pineapple Juice
Marco Pineapple Juice
Milton Pineapple Juice
Mount Hope Pineapple Juice
New Liberty Pineapple Juice
None-Such Pineapple Juice
Nutradiet Pineapple Juice
Old Gold Pineapple Juice
Pono Pineapple Juice
Radio Pineapple Juice
Ranney's Pineapple Juice
Red and White Pineapple Juice
Rival Pineapple Juice
Roundy's Supreme Pineapple Juice
Sanitarium Pineapple Juice
Savoy Pineapple Juice
Snowball Pineapple Juice
Solitaire Pineapple Juice
Sunbeam Pineapple Juice
Sun-Blest Pineapple Juice
Supreme Court Pineapple Juice
Thames Valley Pineapple Juice
Topmost Pineapple Juice
United Pineapple Juice
Weideman Boy Pineapple Juice
What Cheer Pineapple Juice
White Swan Pineapple Juice
White Villa Pineapple Juice
Winfield Supreme Pineapple Juice
Yankee Pineapple Juice

THE PSYCHOLOGY OF LOAFING

(Continued from page 607)

in idleness, grow restless, fretful, trivial, instead of famous, it is a shrewd practical philosophy. But it will never give birth to a new religion, nor a mighty drama, nor a great idea. Such things are born of the stillness, born of man's inactive hours when he loafs and "invites the soul." Slowly they mature, as the soil accumulates richness in the untilled field; and the final harvest will be heavy in proportion as the fallow time was long, warmed by the sun of quiet thoughts and watered by the rain of human sympathy.

The psychology of this is simple and can be tested by any man or woman who is not so dulled by habit that he or she cannot be happy unless their hands and brain are occupied in some habitual way or who are not impervious to impressions that the beauty of the natural world, the quiet of meditation, have no charm for them.

To make the experiment, do not read. Reading is thinking another's thoughts. Do not study or reason, for that is to concentrate on one feature of knowledge or to turn over in your mind ideas already received, perhaps ideas of a purely personal nature. We say we are thinking when what we are too often doing is plotting, plotting our own little advancement in our own little sphere. These things do not belong to loafing. To make the test, simply go apart and meditate.

To meditate is truly to loaf. You lie on a hillside, the sun warm in the blue above you, the world green at your feet. Or perhaps, like some great men of old, you sit with a fishing rod in your hand. Or even, it may be, you but open your window to the midnight and gaze out at the earth's heritage of stars.

And do not think of yourself, of your little prides and pomps, your insect cares and egotistical concerns. Curiously, you almost renounce individuality, freely, gladly, as one who has found the truth. You feel but a drop in the ocean of being; you are one with the fishes, the stars, the blue dome of the sky, the green bowl of the world. You are "imprisoned no more in a small compartment of time" and space, and you discover with astonishment how trivial have been many of the things you did, how unimportant many of the tasks you fancied mattered so.

"A mighty wind of resolution" sets in strongly about you, and the things that are truly great, the ideal things, the impossible thing, seem suddenly not too great to accomplish, not impossible any more.

It is in the silent spaces of our lives that we come to understand things, that we store up our reserve of the ancient virtues, that we prepare ourselves for the supreme effort which will make our lives worth while.

So the farmer, laboriously plowing in the field below, may despise the loafers stretched on the upland grass above him. But the chances are it will be the loafer who some day will write the soul-stirring novel or lead a vast army. For it is always the tendency of action to fall into routine, to become mechanical, till we act not by will but by rule.

We must withdraw and meditate. We must loaf and watch the world go by, even to keep a true perspective on our practical life, to keep our sense of values true, our wills in working order. Our ideal life is never lived in action; our ideal deeds are born of silence. Before we can do big things, we must learn to do nothing.

"SALT OF THE EARTH"

Any one who has ever eaten an unsalted meal—a picnic dinner, for instance, where the hostess forgot the salt—knows how flat even highly flavored foods can taste without it. And he probably understands something of the desperation that led people in earlier days to pay enormous taxes, blaze perilous trade routes, even to go to war for salt.

Today salt is inexpensive, because there is access to an almost inexhaustible world supply of it. The greatest share of the salt obtained in the United States is evaporated from brine wells. Michigan leads this country's six big salt-producing states. The others are Louisiana, Kansas, Ohio, California and West Virginia.

Standard directions for cooking vegetables in water call for it to be salted at the beginning. When broiling or frying meat, on the other hand, salt should be added after or at the end of the cooking. Salt tends to draw out the juices of the meat. In steaks and chops with much surface exposed, this may amount to a considerable loss in meat flavor. A meat roast can lose very little juice this way because there is a comparatively small proportion of exposed surface. So, because it is more convenient, salt the roast before it is cooked.

Foods such as cornstarch puddings, cooked cereals and breads need a bit of salt to bring out the bland flavor of the starch. In a tested recipe for a yeast bread, this is enough to accent the wheaty taste of the flour, but not enough to give a salty taste or to slow the growth of the yeast.

For biscuits, about ⅛ teaspoonful of salt to a cup of flour is usually enough. Muffins and griddle cakes need slightly less than biscuits. The standard amount of salt to use in cooked cereals, such as rice, oatmeal, cornmeal, is about 1 teaspoonful to a quart of water.

Skilful cooks never neglect to add a dash of salt to cooked fruits and fruit drinks. And many find that cocoa, milkshakes and some other beverages are also improved by a few grains of salt.

Because salt seems to make "sweet things sweeter" it should always be included in candies, cakes, ice creams and sweet desserts. Sometimes the cake shortening contains salt. If it doesn't, from ¼ to ½ teaspoonful is enough for the ordinary cake recipe, using from 1 to 2 cupfuls of sugar.

In dishes that call for the beaten whites of eggs, it is a good practice to put a pinch of salt into the whites before beating. The salt stiffens the whites, makes them beat up faster, to a slightly greater volume and makes the foam less likely to become watery on standing.

Another use of salt in egg cookery is to add a little to the water in which eggs are poached. This makes the eggs "set" more quickly. —*U. S. Dept. of Agriculture.*

Vegetables for Flavor

By CLARIBEL ADAMS

DO you remember when our fresh vegetables in winter consisted only of the carrots which were buried in the sand barrel in the cellar or the cabbage which came out of its newspaper hidings? Two standbys—but how the horticulturists have improved them in both texture and flavor. I am sure that the modern carrot and succulent green cabbage would hardly recognize their forbears! Then, too, although lowly in price, they really rate high in the "Who's Who" of the mineral and vitamin elite.

Our vegetables today come to us the year around crisp and fresh or else in the equally satisfactory quick-frozen form. They are no longer strong and pithy. They await only the cook's magic to show their hidden flavors. A few simple rules make this easy for any one.

There has been considerable written about the importance of preserving the mineral and vitamin content of vegetables when cooked. While this point is important, it can be overemphasized, for if flavor has to be sacrificed in order to retain the minerals, we really have not gained much, as the vegetables will not appeal and thus will not be eaten. Our chief aim should be to develop both flavor and appetite appeal. In a varied diet, which includes fresh vegetables and fruits, there is an ample supply of minerals and vitamins for proper nutrition.

In order to retain color and flavor, vegetables should cook uncovered, for this allows the volatile acids, which otherwise destroy color, to escape in the steam. The color of red vegetables, however, is enhanced by acids. This is the reason for combining apples and red cabbage and vinegar or orange juice with beets. Carrots also have a rather stable color, but all green vegetables fade quickly in an acid medium. They should be cooked as rapidly as possible without wearing the vegetable away and *always with the lid off* in order to preserve flavor and color.

There are two general types of vegetables; the sweet juiced, such as peas, string beans, lima beans and celery, and the strong juiced, which are represented by the cabbage family—cauliflower, Brussels sprouts and broccoli. While these two types require distinctly different treatment for best results, there are several general rules which apply to both when cooking for flavor.

First, and of foremost importance to vegetable gourmets, freshness of the vegetable is a timely insurance of flavor. We who are fortunate enough to have our own gardens know the undefinable difference between a market vegetable, often picked too soon, and the sweet flavor of a young vegetable fresh from the garden. All those early morning hoeings and evening waterings are more than repaid by the delightfully different taste. The shorter the route from garden to kettle the better the flavor.

For those times in the year when some of us are dependent on southern sunshine to grow our vegetables, then the method of cookery is much more important. As rapid cookery improves both color and flavor, all vegetables are started in rapidly boiling water. Some varieties of new potatoes are an exception to this rule, as they tend to lose their hardness quicker when started in cold water. For best results the kettle must more than smile: It must laugh.

Any vegetable but spinach may be salted at the start. Spinach is salted toward the end so as to preserve the iron content, which is more soluble in salt water. Research workers have found that salt added at the start of vegetable cookery improves the flavor without lengthening the cooking time. In strong-juiced vegetables, when the water is to be discarded, it also lessens the cooking losses, since most nutrients, except iron, are less soluble in salt water.

The vegetables which belong to the sweet-juiced type contain much soluble sugar. In order to preserve this sweetness and the delicate flavor of this type of vegetable, use barely enough water to cover. More boiling water can be added if necessary during the cooking. Cook rapidly, and when done, simmer the excess water off. The water should be nearly evaporated by the time the vegetable is tender. It is impossible to give the exact amount of water as different types of dishes and different amounts of the vegetable require varying quantities. Then, too, atmospheric conditions affect the rate of evaporation. Season with butter, or allow cream to simmer into the vegetable. All sweet-juiced vegetables may be cooked in this manner, and the minerals remain entirely preserved. Such vegetables as string beans or young carrots may be cooked whole, but it is preferable to cut them up; the shorter cooking time is an aid in preserving color. String beans are attractive when Frenched in long diagonal slices.

Spinach, while not of a strong odor, contains undesirable oxalic acid and so should be cooked as a strong-juiced vegetable in lots of water and the water discarded. If the heavy stems, which contain little nutriment, are also removed before cooking, the flavor is improved and the cooking time shortened. Boil rapidly from 5 to 10 minutes, depending on the amount and age of the greens. The spinach may then be chopped slightly and seasoned with butter or Bechamel sauce. This sauce is described in any good cook book. Spinach cooked in this manner is fresh green in color and loses the bitter taste and consequently the bugaboo attached to its name. The minerals may be lessened; but the spinach is joyfully eaten, and the minerals that remain are consumed. Because the grit collects around the base of the stems, the leaves should be cut off and washed thoroughly in running water or a large basin of water, changing it several times. No one prefers their "peck of dirt" á la spinach!

For those who like corn on the cob sweet and succulent, the fol-

The housewife now can get fresh vegetables in the market at any time of the year. Once purchased, however, she must know how to cook them to retain all their flavor.

Black Box

lowing method will delight their epicurean taste. Select fresh young corn, right from the garden if possible; remove outer husks and silk. Leave a layer of inner husks, and drop into boiling water. Boil rapidly for 3 minutes. Most corn has the sweetness boiled out of it through overcooking. Remove husks, and serve with butter.

Cooked cabbage, which for years was the friend of all digestion "aids" on the market, was really not to blame for this state of affairs. By overdoing the cooking, the chef was not only destroying the delicate flavor and color but also developing indigestibility. Shredded young cabbage is at its best when only boiled from 7 to 15 minutes. When cooked in milk instead of water the coloring is heightened.

All the strong-juiced vegetables which belong to the cabbage family have little odor in cooking, if the utensil is left uncovered. This method allows gradual dissipation of odor, which is unnoticeable.

It is impossible to give the exact cooking time for different vege-

A NATURAL SOURCE OF VITAMINS A, B AND C

Dr. Phillips CITRUS FRUIT JUICES

• Here is a way to add vitamins to your diet and give pleasure to your palate — drink Dr. Phillips Orange and Grapefruit Juice. Uniformly rich and full of flavor. Tree ripened and canned fresh from the grove under the most scientific conditions. Get several cans from your grocer today.

Dr. P. Phillips Canning Co
Orlando, Florida

America's Favorites

PURE
NON-SEPARATING
UNDILUTED
DELICIOUS

THE SUN-RAYED CO., FRANKFORT, IND.

Church's Pure Natural Grape Juice •

made from properly ripened grapes. Contains no added sugar, water or other substance whatsoever.

Free from the excess acid of unripened fruit.

Church Grape Juice Company, Kennewick, Wash.

DO YOU LIKE GOOD CREAM CHEESE?

HAVE YOUR DEALER SHOW YOU THE NAME

Breakstone's

WHEN HE CUTS YOUR ORDER

HEALTH PLAYS

Reprinted from HYGEIA

The School Lunch Room.—11 to 20 characters; time, 15 minutes. Set of 10 copies, 45 cents. Single copy, 10 cents.

The Medicine Men.—A puppet play. 7 characters; time, 10 minutes. Set of 7 copies, 30 cents. Single copy, 5 cents.

Sissy.—4 characters; time, 15 minutes. Set of 4 copies, 25 cents. Single copy, 10 cents.

The Gift a King Accepts.—15 characters. Set of 15 copies, $1.10. Single copies, 10 cents each.

The Magic Fluid (Diphtheria Antitoxin).—8 characters, with chorus, "king's subjects," etc. Set of 8 copies, 35 cents. Single copies, 10 cents each.

Send for free catalog describing other health material

HYGEIA

535 North Dearborn Street CHICAGO

tables, because the amount, the type of utensil and the age of the vegetable all cause variations. All vegetables which are cooked in large amounts of water, however, should be drained as soon as tender. Any vegetable quickly loses "face" or self respect when allowed to become water-logged.

The flavors of a large number of vegetables combine well when cooked together: such as carrots and celery, turnips with peas, carrots and Brussels sprouts, limas and celery. Grated new carrot mixed with shredded nuts is zestful and colorful. It makes an attractive raw salad or dessert when served with cream. Carrot adds both color and flavor as well as vitamins when grated over cabbage or fruit salad. Many other vegetables are now eaten raw and served with French dressing.

Unduly dressing up a cooked vegetable with high seasonings and fancy sauces seems superfluous. Furthermore, it is not an earmark of a good cook. Why destroy the delicate flavor? Some tart sauces which accentuate the vegetable flavor are permissible. Our real aim should not be to cover up lack of flavor but to enhance the flavor of the vegetable itself.

Here are a few ways of using left-over vegetables:

Spinach Loaf

2 tablespoonfuls flour
2 tablespoonfuls butter
About ½ teaspoonful salt
1 cupful rich milk,
¼ cupful finely chopped lean ham
1 cupful minced cooked spinach
4 eggs, well beaten

Make a white sauce by melting the butter; add the flour, and cook a few minutes over a low fire. Add the milk gradually; stir and cook until smooth. Add other ingredients; place in buttered mold, and bake (325 to 350 F.) in a pan of hot water until center is firm. Left-over dandelion greens may also be used.

Turnip Soufflé

4 cupfuls mashed turnips (seasoned)
3 egg whites, well beaten

Fold egg whites into seasoned mashed turnips. Place in a buttered casserole, and bake in a pan of hot water until set. Bake at 325 F. Turnips have a milder flavor when prepared this way.

Corn Fondu

1 cupful milk
1 cupful bread crumbs
1 cupful left-over or canned corn
1 cupful grated cheese
1 tablespoonful melted butter
½ teaspoonful salt
3 eggs, beaten separately, whites very stiff

Mix ingredients in order given, folding the well beaten whites in last with a fork. Bake at 325 F. in a pan of hot water until firm, about one hour; variations depend on depth of dish.

Pennsylvania Potatoes

3 cupfuls mashed potatoes
3 tablespoonfuls melted butter
2 tablespoonfuls chopped onion or chives
2 eggs, well beaten
1 cupful bread crumbs
1 cupful milk
Pinch of saffron dissolved in 1 tablespoonful of water is optional

Melt the butter; add the onion, and when cooked to a delicate brown, add the crumbs. Add milk to the mashed potatoes, and then beat in the other ingredients. Place in a buttered casserole, and bake at 400 F. until a delicate brown. This dish may be prepared the day before and kept in a cool place until ready for browning.

Boiled Eggplant

1 eggplant, not too large
Salt to taste
3 tablespoonfuls butter
½ cupful dry bread crumbs

Peel the eggplant, discarding pithy part near stem. Cut in cubes, and cook in boiling salted water to cover. When tender and soft, drain excess water. Add butter and broken bread or toast to take up excess moisture. If possible to obtain pine nuts, they are delicious when added with the bread. Eggplant is also good when escalloped with buttered bread.

Orange Beets

8 small beets, cooked, diced and seasoned with salt and
2 tablespoonfuls sugar
1 tablespoonful flour
2 tablespoonfuls butter
½ cupful orange juice

Rub the butter and flour together until smooth. Add lightly to the hot diced beets. When melted around the beets, add orange juice, and cook slowly until smooth and seasoning has penetrated.

Try these new ways with common vegetables:

MINT GLAZED CARROTS

2 cupfuls diced carrots
¼ cupful butter
¼ cupful sugar
1 tablespoonful mint sauce or finely chopped mint
½ teaspoonful salt

Cook carrots in rapidly boiling, salted water 15 minutes, and then drain. Place in saucepan with butter and sugar. Cook slowly until soft and glazed. Add mint, turn out on hot platter around roast and pour remaining sauce over carrots.

Carrots are also good when cooked whole until tender, rolled in melted butter and cornflakes and then browned in the oven. With roast of beef they are delicious when parboiled 15 minutes and then baked in the juice of the roast for about 30 minutes. They should be left whole for this method.

CARROT RING

(Attractive for Vegetable Plates)

2 cupfuls carrot pulp
1 teaspoonful salt
1 teaspoonful chopped onions or chives
3 eggs
1 cupful milk
2 tablespoonfuls butter

Cook several carrots until tender. Press through a ricer, and measure 2 cupfuls. Season with salt and onion. Beat eggs slightly, add milk, and then blend with carrot mixture. Pour into well greased ring mold, and set in pan of hot water. Bake at 375 F. for 35 minutes or until set. Unmold on hot platter. Fill center with buttered, cooked celery, Brussels sprouts or peas. Garnish outside with cress.

VEGETABLE "KWIRKS"

Tomatoes stewed with a little minced onion and green pepper and slightly thickened with butter and flour rubbed together make an appetizing luncheon dish when served on toast

If your family objects to the strong flavor of turnips or parsnips, add a little potato before mashing.

Left-over corn has zest when warmed up in tomatoes.

To keep cauliflower white, boil rapidly in lots of water in an uncovered dish. When served whole as a center for vegetable platter it may be made colorful and flavorsome with melted butter and grated cheese or minced chives.

It's A

SENSIBLE DENTIFRICE

Because

IT CLEANS TEETH!

OUR Baking Soda (pure Bicarbonate of Soda) is a good, yet a very low-cost dentifrice. It cleans teeth naturally, pleasantly and thoroughly.

Our brands, Arm & Hammer and Cow Brand, are identical, and are classified as official U.S.P. remedies by the Council on Pharmacy and Chemistry of the American Medical Association.

When prescribed they provide relief from hyperacid types of indigestion, relieve the itching of eczema, hives, poison ivy, prickly heat and other skin affections—are dependable in the treatment of any condition for which Bicarbonate of Soda is indicated.

That is why so many housewives keep at least two packages of our Baking Soda in their homes. One for the medicine cabinet, and one on the kitchen shelf. They are available at grocers' nearly everywhere—at a cost of only a few cents a package.

Business Established in 1846

CHURCH & DWIGHT CO., Inc.
10 Cedar Street New York, N.Y.

QUESTIONS AND *Answers*

Spinal Puncture

To the Editor:—(1) If the needle should accidently puncture the spinal cord itself in making a lumbar puncture, would death or paralysis occur? Would the spinal cord or brain be damaged? (2) After a spinal puncture has been performed for examination of spinal fluid, a severe headache follows which lasts more than two weeks, and the eyes hurt when light falls on them. What causes this condition, and is there a cure for the headache? W. P., Michigan.

Answer.—(1) If the needle pierces the spinal cord while making a lumbar puncture, there is no reason for expecting death or paralysis to occur. The brain would not be damaged, nor is it at all likely that any serious injury of the cord would result.

(2) It has been suggested that sometimes when the needle is withdrawn, spinal fluid follows the pathway of the needle and passes in between the coverings of the spinal cord. Such an occurrence is thought to produce headache. If a considerable quantity of spinal fluid is withdrawn, there is a change in the pressure, which may readily cause headache. Even the removal of a small amount of spinal fluid may have the same effect in some individuals. Rest lying down and quietness are usually sufficient to bring about relief. If the headache is due entirely to the lumbar puncture, it should soon cease. If the headache continues, some other explanation should be sought for its cause.

Pituitary Disturbance

To the Editor:—Are pituitary troubles inherited? Should a young lady with this glandular shortage ever hope to have children of her own? How is the menopause apt to treat her physically? The patient is taking theelin regularly with occasional liver extract shots and is not robust yet, though much better than a year ago. E. W. P., Missouri.

Answer.—The question of pituitary troubles is a broad one. The first thing to determine is whether the trouble really is in the pituitary, and if so just how the gland is at fault. There may be a decreased secretion, an increased secretion or a variable secretion, all of which give different symptoms and require different treatment.

Diseases of this gland are not inherited. There is no reason from this point of view why the patient should not marry.

There are many different hormones or secretions of the pituitary gland; about thirty have been described. Some have to do with growth, and others are closely connected with the sex development, so that if these particular hormones are involved, menstruation may be greatly disturbed and child bearing perhaps interfered with. If the menstruation is normal, the menopause may be no different in these people than in others.

Undoubtedly, theelin and the liver are being prescribed by the doctor for reasons he knows best. Theelin and liver have no influence on the pituitary gland.

Salt Water Solution for Toughening Hands

To the Editor:—Will you please tell me whether a salt and water solution will make the skin of the hands tough when soaked in that solution? What ratio should the ingredients be? H. P., New York.

Answer.—There is no evidence to indicate that soaking the hands in salt water will toughen the skin locally. Ordinary concentration (up to 2 or 3 per cent) has little effect whatever. High concentrations have a tendency to dry the tissues, whether dead or alive and

Ewing Galloway

A spinal puncture for examination of spinal fluid.

to irritate open wounds. A saturated salt solution will at first take the color out of the unbroken skin and finally cause some hyperemia (increase in local blood flow), but even continuous or repeated application for two or three days will cause no permanent effect. Solutions containing salt crystals, however, may be injurious to the skin, causing painful inflammatory reactions. This is evidenced by skin lesions produced in certain workers in industries using salt.

There is no formula generally applicable to toughening tender hands, because the condition may be produced by such a variety of factors that a careful study of the causes operative in each case individually is essential. The following instances will serve to illustrate the complex problem often involved. The hands of one person may become inflamed and fissured during the winter weather because of an inborn tendency to ichthyosis or dry skin. Such a condition is often alleviated merely by the liberal application of a suitable grease. Another individual may have hands which perspire excessively, and as a result the skin becomes macerated and subject to inflammation from bacterial yeast or fungous infection. Such people are frequently benefited by a dusting powder to absorb the excess moisture, particularly one containing tannic acid in the proper concentration to harden the skin and make it resistant to bacterial assault. An additional factor which may be operative is specific sensitivity of the skin to various substances with which the hand may be coming in contact, for example, paint, cleanser, soap, plants and house dust, the importance of which can only be determined by special testing.

Erosion of Teeth

To the Editor:—Please inform me if it is known what causes erosion of the teeth. Would eating grapefruit frequently (four times a week) be a cause?

W. M. B., Connecticut.

Answer.—Erosion of the teeth may come from various causes, but the exact cause or causes are unknown. Although it would appear that it may be related to some as yet unknown disturbances in the body, one type of erosion may be caused or may be aggravated by improper brushing.

It is doubtful if the frequent eating of grapefruit is a cause. But it is known that certain sour foods, such as grapefruit, may produce unpleasant sensations when they come in contact with eroded teeth.

Proper and immediate dental attention usually results in marked relief to patients whose teeth have become unduly sensitive due to erosion of the enamel.

Blood Reactions in Syphilis

To the Editor:—What will return a once negative blood reaction to positive count of 4, excluding a new infection, after the patient has been taking constant treatments for five years and then had a negative reaction for one year? Is a spinal test dangerous, and does it cause sickness afterwards? Can a woman have a healthy baby if syphilis has been fully cleared up, showing a negative reaction for two years?

R. M., Illinois.

Answer.—In these days, physicians treating syphilis do not lay too great stress on blood reactions alone. It is impossible to answer this question further because we are not in possession of all the facts.

A lumbar puncture is not dangerous when performed by a competent physician. Following the puncture, the patient should lie down for several hours or for a day or two. Occasionally, a headache may follow a lumbar puncture. It is always relieved as soon as the patient lies down.

If the patient has had syphilis and has had thorough treatment given in alternating courses and in a continuous manner, then such a patient need have no fear of danger to the child, particularly if all symptoms have cleared up.

It is generally agreed today that all syphilitic women should receive antisyphilitic treatment throughout every pregnancy, even if they are apparently well.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

Deafness and Heredity

To the Editor:—A young friend of mine plans on marriage. The groom has a brother who was born deaf and dumb. What are the possibilities of this couple having children who can hear?

C. W. V., California.

Answer.—Less than 30 per cent of deaf mutism is hereditary. It is most important to determine whether or not the defect is hereditary. Sometimes hereditary deafness is present at birth; but more commonly it appears in childhood and is progressive. Mutism is a natural sequel of total deafness in early life; as sound is not heard, it cannot be reproduced.

The majority of cases of complete deafness are not hereditary but are due to disease either in the mother during her pregnancy or early in the life of the child. Some prenatal causes of deafness are excessive alcohol consumption, large doses of quinine usually given for treatment of malaria and certain germ diseases—syphilis, diphtheria, smallpox, typhoid and others. In these instances, although the child is born deaf, the condition is not hereditary. Diseases in the infant which might be followed by deafness are scarlet fever, measles, mumps and meningitis. A thorough search should be made for a possible cause. If more than one instance of deafness exists in the family and if it is definitely proved to be hereditary, then the type of deafness should be determined. Inner-ear deafness is dominant and could be expected in half of the children if either parent be so afflicted. It is not transmitted by the unaffected members of the family.

The most common type of hereditary deafness present at birth is a recessive character. For a child to show a recessive defect, it must be present in the families of both parents. Intermarriage, in a family showing this fault, greatly increases the possibility of deafness in the offspring.

If neither parent is deaf, but the condition exists in close relatives on both sides of the family, the possibilities of having a first child a deaf mute is one in four.

If the condition has occurred in more distant relatives of both parents, it is possible but unlikely, that the defect will appear again.

(Continued on page 663)

BOOKS ON HEALTH

Official Basket Ball Guide for Women

National Section on Women's Athletics of the American Association for Health, Physical Education and Recreation. Paper. Price, 25 cents. Pp. 80. New York: A. S. Barnes & Co., 1938.

This little publication is similar in form to the "Guides" for different sports formerly published by The American Sports Publishing Company. In content it differs considerably in that it includes articles by authorities on amount and kind of exercise for women, desirable differences between basketball for men and women, suggestions for teaching basketball to large numbers, more advanced technics for teams, suggestions on equipment and advice to officials. The actual rules are placed in a supplementary booklet of convenient pocket size. There is also a chart for posting on a bulletin board which gives in a brief way, with illustrations, an excellent summary of the rules and the technic of play.

The book is concise, clear and should be most helpful to all who are interested in basketball for women, whether as participants, teachers or officials.

DUDLEY B. REED, M.D.

Beauty Plus—

By Mary MacFadyen, M.D. Cloth. Price, $1.96. Pp. 272. Illustrated. New York: Emerson Books, Inc., 1938.

Of all the prolific crop of books on beauty which have been published in recent years, "Beauty Plus—" seems to be the only one by a woman physician.

Starting with the premise that any woman can be good looking if she will only learn to make the most of herself, Dr. MacFadyen proceeds to give advice on all details of the daily care of skin, hair and nails, including bathing, the selection of all kinds of cosmetics, the application of makeup and the treatment of minor conditions of the skin, which detract from one's good appearance. Several chapters are devoted to the factors that insure a good figure: posture, gait, diet and weight control and programs of exercise for parts of the body which may require special attention. Points of personality and charm, smoking and drinking, recreation, allergy, first aid and several ailments which prevent one from feeling one's healthiest and happiest—all these are given, if not exhaustive consideration, at least sufficient to make the reader want to learn more about them.

The many recipes for cosmetic preparations go back to the early days when the perfect lady had to make all her own. Space does not permit discussion of them beyond a hint that a concentration of 25 per cent aluminum chloride in an antiperspirant is too high for comfort; that mineral oil products and glycerin are not good for a dry skin; and that every cream made by a cold process is not *ipso facto* a "cold cream." Some readers may want to make up their own preparations or order them from a pharma-

Courtesy The New Yorker

"I'd say it's a clear case of split personality, Mr. Cosgrove."

cist, but observation has revealed that the average modern lady or miss, while she may try her hand once or twice at home-made concoctions, usually finds it easier and cheaper in the end to select her cosmetics from among the lavish displays of good standard products on the market.

The book is delightfully illustrated with sketches by Dr. Frank Netter, the author's husband. The style of writing is engagingly informal; but here and there it is careless, or cluttered, or colloquial to the point of lapses in English.

FLORENCE E. WALL.

Sportsmanlike Driving

Cloth. Pp. 478. Washington, D. C.: American Automobile Association, 1939.

The importance of driving a motor car as a part of living in the United States becomes apparent when we realize that here is a volume of many hundreds of pages devoted wholly to the art of driving. Apparently 40 million people in the United States drive motor cars; but few of them give much attention to what they are doing. The first section of the volume deals with the nature of driving, reaction time, eyesight, physical fitness and judgment. The second section of the book is concerned with the responsibility of the driver and of the pedestrian. The third section concerns sound driving practices; the fourth, society's responsibilities in the matter, and the fifth, the technic of driving. The book contains a vast amount of data about the motor car, the psychology of transportation and, in fact, about everything that seems to be known in this field. The material was originally published in the form of five pamphlets. It is useful to have them under a single cover.

MORRIS FISHBEIN, M.D.

Guiding Human Misfits

By Alexandra Adler, M.D. Cloth. Price, $1.75. Pp. 85. New York: The Macmillan Company, 1938.

The examination and treatment of problem children and persons with behavior and adjustment problems has developed enormously in the past thirty years. Psychiatry at the turn of the century was largely observational. The psychiatrist considered that he was doing his duty if he decided that an individual was insane or not insane merely by observing his conduct and naming, according to certain medical rules, a certain type of mental disorder. The milder emotional maladjustment and behavior difficulties were ignored, partly because the science was not fully developed, and partly because medical men did not realize that mild mental diseases were as important in medical practice as the mild diseases of the nose and throat are to the practitioners of the specialties dealing with those parts of the body.

With the development of psychiatry, however, it was realized that there was much more to conduct disorders than the actual behavior which the individual manifested. Underlying the maladjusted conditions were certain complexes which arose in childhood and were important because they interfered with the proper thinking processes of the more mature individual. Sigmund Freud in Vienna founded what has now become a highly developed school of diagnosis and treatment and developed technic of diagnosis and treatment of mental disorder, including particularly those which do not cause insanity but do cause maladjustment, the neuroses and psychoneuroses. One of Freud's most competent students was Alfred Adler, who came to this country and initiated psychiatry into his particular school of psychiatric treatment known as individual psychology. The basis of this school was the so-called inferiority complex, whereby a person who is physically, socially or mentally inferior to others compensated or developed a neurosis in order to make an adequate adjustment. Since Dr. Adler's death his daughter, Alexandra, the author of this book, has been one of his chief disciples.

The present volume is a rather brief discussion of behavior disorders in children, the neuroses in children, criminology and treatment of these conditions. Dr. Adler discusses in rather simple fashion a few cases which have come to her attention and has explained what was the matter with them and how they could be adjusted by means of correcting their feelings of inferiority and adjusting them to their proper social status. She emphasizes that the so-called neurotic condition is a maladjustment situation arising from a person's attempt to escape from his inadequacy in the social world.

There is a good deal to what Dr. Adler has to say; but of course this small book cannot be entirely conclusive, and her approach is only one to the whole subject of diagnosis and treatment of mental maladjustments of various sorts. If one bears in mind that she represents only one school of psychiatric thought, and a school which does not have a great number of adherents, one can gain considerable information from the book. I would not recommend the book as a means of advising parents how to deal with their maladjusted children, for the subject is not covered in a sufficiently comprehensive fashion. It is, however, well written and interesting, and there are a number of novel and even worthwhile facts presented.

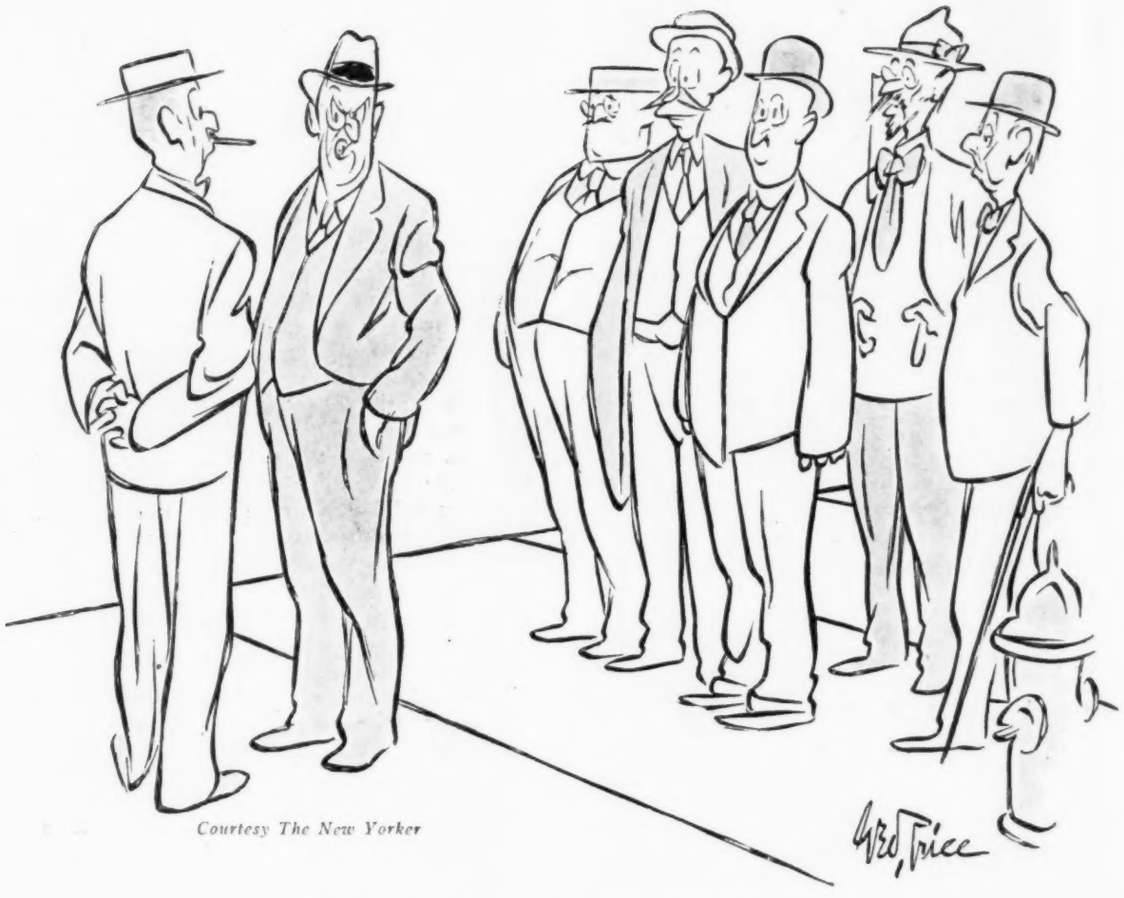
LOWELL S. SELLING.

Recipes and Menus for Allergics

By Myra May Haas in collaboration with Nathan Schaffer, M.D. Cloth. Price, $2.50. Pp. 250. New York: Dodd, Mead & Co., Inc., 1939.

For those who are sensitive to milk, wheat or egg, singly or in any combination, this is a valuable book. The preface is written by Dr. Nathan Schaffer. In its eighteen pages, it gives a good explanation of the principles of allergy. The rest of the book is devoted entirely to recipes and menus. All but the last five pages are devoted to the three foods mentioned above. The chapters are divided as follows: (1) egg allergy, (2) milk allergy, (3) wheat allergy, (4) egg and milk allergy, (5) egg and wheat allergy, (6) milk and wheat allergy, (7) egg, milk and wheat allergy and finally miscellaneous allergies with brief notes covering five pages. Each chapter, except the last, is preceded by suggested menus for the whole week. The recipes give specific instruction for preparation and are numerous for each variety of allergy. The sources of the information are numerous, mostly, however, from many magazine articles and cook books. The book is a most thorough and authoritative collection of recipes covering wheat, egg and milk sensitivity. In addition, the many footnotes, explaining the composition of the various ingredients of the recipes supply valuable information for the physician, as well as the interested lay reader.

BEN Z. RAPPAPORT.



Courtesy The New Yorker

"They're friends—leftovers from the old Dale Carnegie days."

Dream Analysis

By Ella Freeman Sharpe. Cloth. Price, $2.50. Pp. 211. New York: W. W. Norton & Co., Inc., 1937.

In this book Dr. Sharpe undertakes to present the Freudian or psychoanalytic views about our dreams. From the psychoanalytic point of view, her intention is evidently to be at once orthodox and comprehensive; and her book has the merit which is usual to any new presentation of a familiar subject when that new presentation aims to be readable and is done competently.

Her chief departure from the orthodox Freudian point of view is to be found in her assertions as to the prognostic value of dreams—the value, that is, of dreams as a basis for our predictions about the dreamer's future mental health or sickness. She seems to assume as a matter of course that from an individual's dreams we can make such predictions correctly. In this assumption she departs from the main body of psychoanalytic doctrine and observation. She does not profess to make new contributions to the subject about which she writes. In this connection it may be said, as a matter of interest to the reader who is not familiar with the subject of psychoanalysis, that there have been few or no outstandingly important contributions to this subject since 1900, when Freud published his own book, "The Interpretation of Dreams."

Dr. Sharpe's book succeeds well as a readable presentation of the subject: The style is pleasing; the dreams and case histories are interesting and lucidly presented; the chapters and the whole book are well organized, with a topical summary of each chapter as part of the chapter heading. Only in one respect is the book fairly certain to exasperate the reader who is not biased in favor of psychoanalysis, and in this one respect it has even provoked criticism from at least one prominent psychoanalyst. The respect in question is a product of Dr. Sharpe's enthusiasm: She is inclined to be dogmatic, there is a suggestion that she regards the person who has been analyzed as nearly superman, and her last chapter constitutes a brief effusion suggesting rather the testimonial of a religious enthusiast than the sober judgment of scientist or physician. One misses Freud's cool, critical perspective.

As to the audience to whom this book is directed: In her preface she says that the book "is addressed especially to psychoanalysts engaged in practical treatment. The theory of dream psychology is not restated . . . some knowledge of it being assumed." But the non-analyst, whether doctor or layman, need not shrink from the book for that reason. He may expect to find it quite understandable. J. A. A.

[NOTE.—Books reviewed or mentioned in this section, other than those published by the American Medical Association, should be ordered from booksellers or direct from the publishers. They may not be ordered through HYGEIA or the American Medical Association. Publishers' addresses will be found at the end of the section.]

Education of the Handicapped

VOLUME I: HISTORY

By Merle E. Frampton, Ph.D., and Hugh Grant Bowell, M.D. Cloth. Price, $2.40. Pp. 260. Yonkers-on-Hudson, N. Y.: World Book Company, 1938.

For purposes of education the authors have divided the handicapped into four large groups: the physically handicapped, the mentally handicapped, the socially handicapped and persons with combinations of physical, mental or social handicaps. Each of these groups is further subdivided as, for example, the mentally handicapped, in which are included persons who in native intellectual capacity fall in the lower ranges of human intelligence, such as morons, the feebleminded, imbeciles and idiots; persons who have suffered accident or disease resulting in the impairment of mental functions, and persons suffering from emotional instability, psychopathic states and insanity. Obviously each of these groups has experienced somewhat different roles in the history of civilization. That which society has done to and for these various groups is the subject of brief descriptions in this book. Naturally with a changed social outlook, especially in the past hundred years, the greatest emphasis is laid on the recent historical developments. The closing chapter, which is entitled "Where Next?" serves principally as an introduction to the companion volume which will be devoted to existing work with the handicapped, solutions and puzzles of the moment, trends of development and a further and more specific tabulation of the needs of the work if its future is to remain as profitable as its past and present.

E. P. JORDAN, M.D.

PUBLISHERS' ADDRESSES

The following list contains the addresses of publishers whose books are reviewed in this section:

A. S. Barnes & Co., 67 W. 44th St., New York City.

Emerson Books, Inc., 251 W. 19th St., New York City.

American Automobile Association, Pennsylvania Ave. at 17th St., Washington, D. C.

The Macmillan Company, 60 Fifth Ave., New York City

Dodd, Mead & Co., Inc., 443 Fourth Ave., New York City.

W. W. Norton & Co., 70 Fifth Ave., New York City.

World Book Company, Yonkers-on-Hudson, New York City.

Penny Marsh—Public Health Nurse

By Dorothy Deming, R.N. Cloth. Price, $2. Pp. 266. New York: Dodd, Mead & Co., 1938.

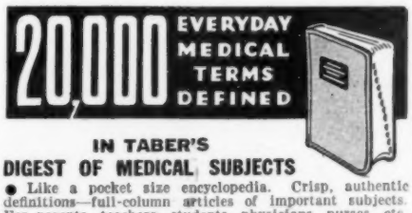
This book is propaganda for public health nursing, devoted to its propagation or increase. It is a lively, interesting and at times gripping story of the adventures of an attractive young woman in public health nursing. It never seems to be straining for effect or endeavoring to teach, and yet it does so effectively. The advantages and attractions in the field of public health nursing are shown through the experiences of the fictitious Penny Marsh; the disadvantages are not played up, but they are not unduly minimized either. The qualifications necessary for success in public health nursing are skilfully depicted in Penny and other characters.

Opportunity for professional advancement is cunningly interwoven with romance and the temptation to travel for pleasure at the invitation of a rich uncle. The climax comes in which a choice is made, which might have been more cleancut if the author was aiming at portrayal of the best solution, but which is probably more in keeping with plausibility and actual fact. The book is distinctly readable, merely as a story. For the young nurse groping for guidance, it is an illuminating document with respect to public health nursing. For the citizen, wondering "what on earth does the public health nurse do if she doesn't nurse patients," it should be an eye-opener. It is a definite contribution to the literature of public health nursing and of public health. The cartoon sketches add to the attractiveness of the format.

W. W. BAUER, M.D.

My experience has shown that tobacco slows up the reflexes of athletes, lowers their morale and does nothing constructive.

—*Knute Rockne.*



IN TABER'S
DIGEST OF MEDICAL SUBJECTS

● Like a pocket size encyclopedia. Crisp, authentic definitions—full-column articles of important subjects. For parents, teachers, students, physicians, nurses, etc. Clarifies terms of **Disease, Nutrition, Anatomy, Physiology, Treatment, Nursing,** etc. Rich maroon, flexible binding. Thumb-Indexed. 587 pages. Bible paper. 1938. $3.00 Postpaid.

F. A. DAVIS CO., 1914-16 Cherry St., Phila., Pa.

A WHOLE LIBRARY OF MODERN SEX INFORMATION

in One Comprehensive Volume

OUR SEX LIFE

By FRITZ KAHN, M. D.

[This standard European work, encyclopedic in its scope, is now made available for American readers. It is the most complete book on all phases of sex ever published in this country.]

41 Illustrations, Many in Color, Are Amazing for their Clarity, Originality, and Ingenuity.

SECTION HEADINGS

PART ONE
The Sexual Functions

PART TWO
Sexual Intercourse

PART THREE
The Hygiene of Sex Life

PART FOUR
The Problems of Fertility

PART FIVE
The Disturbances of Sex Life

PART SIX
The Diseases of Sex Life

PART SEVEN
Prostitution

PART EIGHT
Juvenile Sex Life

PART NINE
The Sex Life of Unmarried People

PART TEN
The Solution of the Sex Problem

33 Chapters · 508 Pages · $6.00

Prof. H. M. Parshley of Smith says:

"Dr. Fritz Kahn's OUR SEX LIFE is a comprehensive scientific account of all aspects of the subject, adapted for the lay reader. It is notable for its sane, many-sided treatment of the social problems of human sexuality and for its unusually excellent and novel illustrations. Detailed discussions are given of human sex characteristics, the anatomy and physiology of reproduction, the art of love, varieties of sexual behavior, venereal disease, prostitution, sex education, and sex morality. The translation is remarkably good, and the author's wisdom and wit make reading a constant pleasure."

ALFRED · A · KNOPF · 501 Madison Ave. · N · Y

AMUSING MEDICAL PATENTS

(*Continued from page 624*)

band made of carbonized steel in a circular form. The band, magnetized with reversed poles at the ends, is secured to the hat in a position to bring it into contact with the head of the wearer.

A companion to this is the magnetic drinking cup invented by Herbert A. Parkyn, also of Chicago, in August 1900. The drinking cup, which is pictured in the form of a goblet, is constructed in two parts, each magnetized by a current of electricity. When the parts are fastened together the whole framework becomes a magnet which magnetizes any liquid that may be put into it. Any one drinking from the cup gathers "a powerful health-giving suggestion of electricity and magnetism."

It would seem from the number of rest-promoting appliances that more than anything else people want to be soothed. A rest-promoting patent of L. M. Hoey of Texas is designed to exclude light and sound and prevent snoring. The headgear consists of eye shields and a nose guard combined with ear plugs on an adjustable framework and a "stirrup" to hold up the chin, thus preventing the mouth from dropping open.

Not many inventions can be credited to women, but Fanny W. Paul of New York took out a patent on a cure for insomnia, which she called a "Patting Sleep Inducer." It is composed of a collar-like band, provided with an adjustable padded spring and a strap for retaining the band in position on the neck. Another strap holds a small paddle against the cheek. A slight pressure releases a spring that sets the paddle in motion, resulting in a continuous patting. Sleep, the inventor claims, will be induced in from 10 to 20 minutes.

Strangely enough, many beauty devices are patented under the heading of surgical instruments; but no doubt the procedure involved in their application warrants the classification. The little gadget for embedding artificial hair into the scalp is one of these. Invented by Aurel Popovics of Austria in 1913, the instrument relates to a process by means of which "hairs can be planted into the skin with such a degree of perfection as to render the artificial nature of the hair covering thus produced completely unnoticeable."

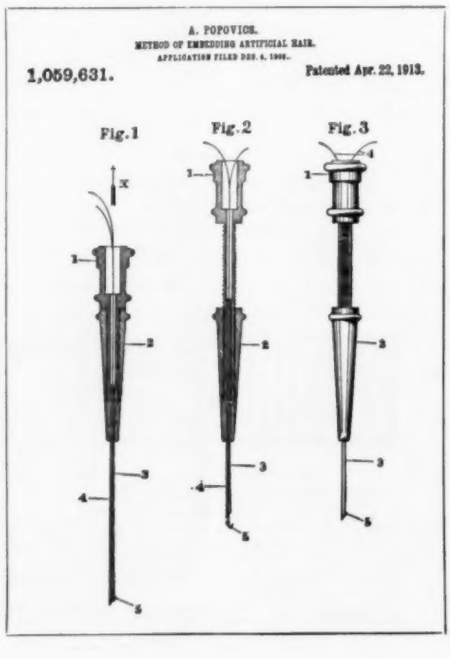
The hairs are passed through the hollow needle so that the ends project from the point. On the end of each hair is a small hook. These are introduced into the scalp and the needle withdrawn. The hook embeds the hair firmly and securely and prevents it from falling out even when shampooed.

An exercising device for teeth and gums was invented in 1923 by Charles G. Purdy of Brooklyn, N. Y. It comprises a plate so shaped as to conform to the general contour of the mouth. A cord and spring are attached to it with a similar plate at the other end. The plates are seized between the teeth of two individuals who pull in opposite directions in the manner of the so-called "tug-of-war."

William R. Hamilton of Oklahoma competes with the chiropractors with his invention, which he calls a vertebrae adjuster. The object of his invention, so the specifications state, is "to allow the patient to adjust the vertebrae by his own efforts." The adjuster is constructed of metal bent into a V shape. The apex is rounded off to engage the back of the patient on opposite sides of the spinal column and is fastened to the wall at the correct height. The patient then presses his back against the adjuster and exerts proper and required pressure against the vertebrae, thus accomplishing an "adjustment."

Another "back pusher" which has a much different use is the device invented by Allain Eustis of New Orleans. It is "a new and useful improvement" for assisting infirm persons in ascending steps. A "pressure plate" adapted to the form of the person to be assisted is connected by hinged bars or arms to the harness worn by the attendant who, in turn, furnishes the "power" by which the infirm patient is propelled.

It is not surprising, in view of the more than 2 million patents already granted and new applications arriving at the rate of approximately 100,000 a year (of which about 50,000 are granted), that a corps of 650 trained scientists and technicians are required to examine applications as to novelty. The U. S. Patent Office, too, has become a great rendezvous for inventors. At almost any hour of the day, they can be seen searching through files or gazing into cases in which are housed the models of an earlier era. You can almost see a "new and useful improvement" evolving before your very eyes, as the "ingenious ones" go their way armed with an idea that they no doubt hope and expect will some time be among the first hundred really great inventions.


A. POPOVICS.
METHOD OF EMBEDDING ARTIFICIAL HAIR.
APPLICATION FILED DEC. 4, 1909.
1,059,631. Patented Apr. 22, 1913.
Fig. 1 Fig. 2 Fig. 3

Such was the simple device that was designed to embed artificial hair into the scalp. The hairs were passed through the hollow needle so that the ends projected from the point. On the end of each hair, there was a hook which was stuck into the scalp and then the needle withdrawn.

MUSCULAR FATIGUE (Continued from page 627)

tivity. If you are enrolling in a class in conditioning as an antidote for years of no exercise of any kind, don't let your enthusiasm run away with you on the first day. You'll be sorry on the second and third days.

Remember that you are an intelligent person with a mind of your own. You don't have to burn your candle at both ends or run yourself ragged just because it seems to be the socially accepted pattern of behavior.

Short periods of rest, especially before meals, will do much to stave off fatigue, increase good digestion and aid in general relaxation.

On the remedial side, heat is relaxing and calming. It also relieves muscular soreness and stiffness. A warm, but not too hot, bath following activity will help induce sleep, likewise a hot, but not a stimulating, drink.

Be sure it really is muscular fatigue from which you suffer. Look back over your days' schedule for a good reason to have muscular fatigue. If you don't find any such reason, be suspicious. It may be laziness or boredom or emotional fatigue, in which case a little recreational activity outdoors in pleasant company will be a distinct relief. And there are other causes of fatigue besides muscular exertion. These include nutritional deficiencies, tuberculosis, foci of infection in tonsils, sinus or teeth and many others, which will require the attention of a physician.

It is important to remember that human beings were meant to be active, physically, mentally and emotionally. It is the way we accomplish things; it is our means of contributing to our environment, our way of expressing our individuality. It is the channel through which all progress is made. And as we were made to be active, so we were also made to get tired. But if you allow yourself to get *too* fatigued, if you go too deeply into the energy-borrowing business, then beware. Sleep, rest and relaxation may be difficult to attain. Within the limits of normal fatigue, sleep is spontaneous. Beyond the point of normal fatigue, irritability, sleeplessness and perhaps grave damage may result. Rather than suggest ways of combating overfatigue let me suggest in deep earnestness, "Avoid it."

TRAVELING WITH THE BABY

Traveling with a baby, whether by train, boat, automobile or airplane, requires careful planning for his safety and comfort, according to the bulletin "Infant Care" published by the Children's Bureau of the U. S. Department of Labor.

The most important thing is to get good advice and to make careful plans before starting on the trip. Remember that if the baby is artificially fed, it is necessary to boil the milk mixture, the drinking water, the bottles, stoppers, nipples, measuring glass and funnel. It must also be remembered that even if the baby is breast fed, provision must be made for boiling his drinking water as well as the bottles and nipples used for drinking water.

For a trip no longer than twenty-four hours the boiling of the milk mixture, drinking water, bottles and nipples may be done at home. The cold milk mixture and the drinking water can be carried in vacuum bottles. If the family is traveling on a train, refrigeration may be available if there is a buffet or dining car on the train. In this case the milk mixture may be prepared in advance and put into nursing bottles that have been boiled and then stoppered with rubber corks. Or they may be covered either with rubber caps that have been boiled or with wax paper held with rubber bands. The bottles should then be wrapped carefully in a clean cloth. The nipples should be boiled and then wrapped in sterile gauze or put into a glass jar with a screw-on top. When preparing for a day's trip, boil a day's supply of milk mixture as usual, and chill it thoroughly. Milk mixture for a baby must not be put into a vacuum bottle while it is warm, as it may sour. The vacuum bottle must be cleaned, scalded and cooled before the cold milk mixture is put into it. Milk from a vacuum bottle should not be used after twenty-four hours.

A MOTHER-SAVER

Scientific Diaper Service Approved by Editor

Today mother really does "know best." Sureness and certainty have taken the place of the trial-and-error method of the past. Mothers have been emancipated!

A few years ago mothers were resigned to the drudgery and unpleasantness of home diaper washing. Our mothers *had* to cope with it but today specialized diaper service stands ready to whisk the entire diaper problem right out of the household.

Think what it means to have a luxurious supply of fluffy sterilized diapers always on hand. With this protection, "diaper rash" which used to be considered inevitable, is now a thing of the past. Formerly available only to the finest hospitals, scientific diaper service has been extended to the home, in all large cities, at amazingly low cost.

Doctors today are advising mothers that diaper service is a safeguard to their own health as well as their baby's. Lucky modern mothers!

Irene Parrott

Editor of
BABY TALK MAGAZINE

Write BABY TALK MAGAZINE, 424 Madison Avenue, New York City, for Irene Parrott's 52 page "Household Manual of Baby Care"—10c per copy.

What to Do About

Thumb Sucking

By WILLIAM I. FISHBEIN

THERE are a number of habits occurring in children which are frequently considered symptoms of nervousness. They include sleeplessness, night terrors, thumb sucking, nail biting, masturbation, poor appetite or complete refusal to eat and, in some children, a tendency to do exactly the opposite of what is desired of them. This last trait is known as negativism.

It is probable that in certain children these habits are more likely to form because of something in their underlying physical makeup. However, it is the conduct of the child as managed by the parents, which determines whether these habits will persist. Some of them, while normal in early infancy, may be considered abnormal when they persist into later childhood. Particularly is this true of thumb sucking.

The majority of infants suck their thumbs at some time during infancy. There are numerous theories to explain the great frequency of this habit. One group of physicians and psychologists explains it as due to inadequate feeding. The amount of food is either too great or too little, the time interval between feedings too long or too short. The obvious correction is readjustment of the feeding schedule by the physician. It may be stated, however, that cure of the habit by such readjustment is infrequent.

Other specialists claim the habit is due to inadequate satisfaction of the sucking impulse. The milk may flow too freely from the mother's breast or the bottle. The infant, then, finishes eating before he has satisfied the sucking impulse. The correction is to leave the child at the breast longer at each feeding period, or provide adequate sucking in some other way.

I know of no thumb-sucking cures produced on this basis.

One group of psychologists has explained thumb sucking as an unsatisfied craving for affection. Another explanation is that it is a chance habit, formed when the baby's hand first comes into contact with his lips and maintained and reinforced by the pleasurable sensation it brings.

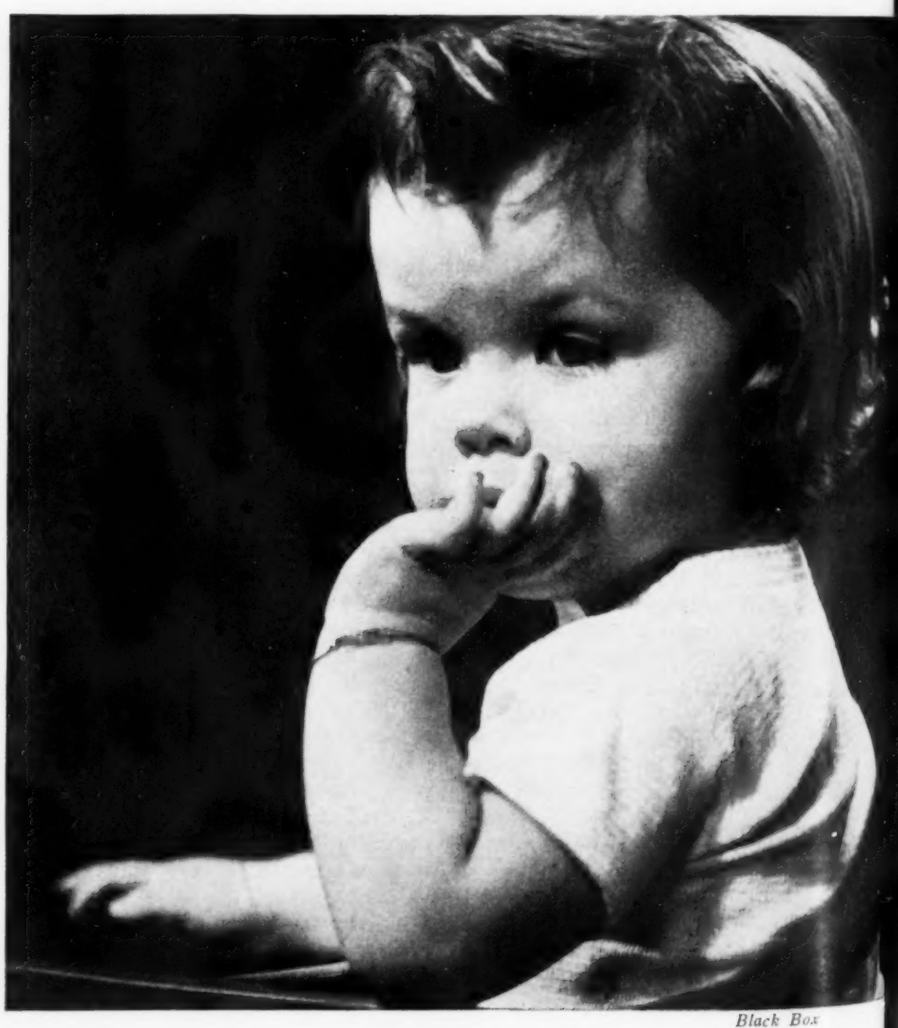
Thumb sucking may occur in the infant before birth. It may be prominent during the first few weeks of life, vanish and re-appear about the third month when the infant can voluntarily bring the hand to the mouth with ease. Sucking of the fists at this age may be noted prior to and after feedings.

During the fourth month and later at teething periods the sucking may be more prominent. This has led to the belief that the sucking relieves the irritation of inflamed gums and possibly aids dentition. The sucking may become less noticeable between teething periods.

More boys than girls have the thumb-sucking habit. The thumb suckers are usually good sleepers, starting at an early age. They are likely to fail to awaken for the night bottle when 3 or 4 months of age. They play contentedly when alone but are sociable. They are inclined to be active but easily fatigued.

With so many possible explanations for thumb sucking, it seems probable that there is no one single cause and similarly that there is no one single method of prevention or cure applicable to all children.

Whether or not any attempt should be made to correct thumb sucking in early infancy is a mat-



Black Box

ter of some dispute. On the other hand, the habit may persist into later childhood, and the child's interest in the sucking act may be sufficiently great to prevent normal interest in essential activities. In addition there is the danger of malformation of the jaws, with protruding front teeth. It may warp the personality and encourage infantilism. Its persistence indicates that the child is not outgrowing babyhood.

The simple removal of the thumb from the child's mouth is sufficient to cure thumb sucking in many instances. Mechanical restraint advocated by some is equally disapproved by others. Again, while satisfactory in the occasional child this method will be unavailing or even harmful in another, depending on the child's personality and on the fixity of the habit. If such restraint is employed in the face of opposition from the infant or child, it serves to keep the habit in his attention—to keep his mind on it. Furthermore, it challenges him, and he quickly becomes aware that continuation of the habit means he has achieved a conquest over his parents or at least has aggravated them to some extent.

Unless the habit is easily broken by removal of the thumb or finger from the mouth and by the application of restraining devices for a few days, it would seem, as a general rule, to be the better part of valor to ignore the habit entirely until the child is from 2½ to 3 years of age. At this period the child becomes susceptible to new forms of approach.

Among the inciting factors toward thumb sucking is fatigue, which frequently precedes a period of sucking. The child may often go to sleep with his thumb in his mouth. It seems important, therefore, in preventing the habit to assure adequate time for the infant's sleep, that he is not unduly stimulated by being constantly in the company of adults and that his habits are regular.

At the time of weaning, the struggle with thumb sucking may reach a crisis. Although nipples or "pacifiers" are spurned by the modern physician, they may prove to be the weapon necessary to cure intractible thumb sucking. It is easier to keep such a nipple clean and sanitary than it is the child's thumb. It is far less difficult to break the nipple habit by gradual withdrawal than it is the habit of thumb sucking since the child's thumb will always be available to him.

After the child attains his third year, if the habit has persisted, it should be attacked but not too vigorously. Spankings, while painful, are exciting and leave no doubt in the child's mind that he is the center of attention, for the time being at least. The spanking then becomes a reward rather than a punishment. Overanxiety or panic on the part of the parents exaggerates the thumb sucking in the child's mind and fixes his attention on it. He is never allowed to forget the habit. The more attention the parents pay to the condition, under such circumstances, the worse the habit becomes.

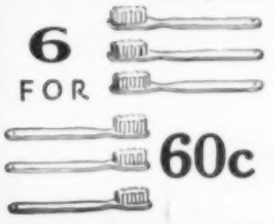
Occasional cures of thumb sucking by punishment or restraint may be followed by the development of other nervous habits to replace it. If a sound physical regimen is set up, if the child's daily life is emotionally satisfying, the thumb sucking may vanish because it is no longer needed as a consolation. On the other hand, unless such readjustments in the child's life are made, other methods of attempting to control the sucking habit may lead to intensification of it.

Nervous habits often appear in pairs. Accompanying thumb sucking may be a concomitant attachment to some furry or wooly object, such as a toy dog or fuzzy blanket. The child sucks the thumb of one hand and with the other either picks the fuzz from the blanket, strokes the dog or rubs it against his nose. Removal of this object to which the child has formed the attachment may on occasion dramatically serve to break the thumb-sucking habit. Sucking the thumb is not easy to overcome, nor is it as a rule so harmful or so liable to interfere with normal physical and mental development as to cause parents undue concern. To ignore it and concentrate on the child's general development is the wisest course in most instances. In the occasional child, in whom jaw deformities and interference with interest in other activities are developing, particular attention should be devoted to readjustment of the child's emotional life. This

DENTISTS USE THIS BRUSH BECAUSE IT'S DESIGNED FOR BEST RESULTS!

Correct, modern massage-brushing is possible *only* if the toothbrush is a properly designed instrument to facilitate the prescribed technique. TAKAMINE does more than meet dental requirements for quality and design. For, *only* Takamine encourages frequent renewal by its practical low cost that makes it possible for everyone to change to a new sanitary brush at least once every month.

TAKAMINE



6 FOR 60c

TAKAMINE CORP.
132 Front Street, New York City
If your drug or toilet goods counter cannot supply you with Takamines, send 60c to us for INTRODUCTORY package of 6 Standard Takamine Toothbrushes.
Name.....
Address.....
SEND COUPON

STOP THUMBSUCKING

DON'T LET IT ROB YOUR CHILD OF FUTURE HAPPINESS

Thumbsucking often causes protruding teeth, elongated palate and parrot lips. Stop this harmful and unsanitary habit with PREVEN-TA-HABITS, the scientific corrective armlet that allows plenty of freedom for normal play. Simple in construction and free from unsanitary straps and strings, they simply slip over the arm, snap, and the child cannot remove them.
Ask your doctor or dentist about the effectiveness of PREVEN-TA-HABITS. If your local surgical or dental store cannot supply you, write us for an illustrated folder.
STEWART MFG. CO., 301 W. Church Ave., Knoxville, Tenn.

CONCISE—AUTHORITATIVE—MATTER-OF-FACT
—COVERS EVERYTHING

"A Child is to be Born"

Reprinted for expectant mothers from the series in "Hygeia"

Symptoms—Exercise Diet—Clothing 10c American Medical Assn. 535 N. Dearborn St., Chicago

Thumb-Sucking
PREVENTED THE NEW WAY
Simply apply BITE-X to thumbs or finger tips. It instantly forms a tough transparent coating unpalatable to taste. Also stops nail biting. Contains Aloin, 3.1%—Oleo Resin Capsicum, 1.5% in a collodion base. Approved by child specialists. Send for free booklet.
Satisfactory Results or Money Refunded
MAIL $1.00 to Dept. 204
CHILD WELFARE GUILD, 386 4th Ave., N.Y.

can best be carried out under the guidance of the physician with special knowledge of childhood behavior.

As a general rule, the correct way of treating nervous symptoms is to ignore them completely, and to have every one else in the child's environment follow a similar plan. At the same time, general treatment should be employed. Assure sufficient rest, fresh air and sunshine for the child. Avoid undue excitement. Make use of the child's desire to grow up, and praise him as much as possible. This gives him a feeling of security and the wish to behave properly.

See that the child has plenty of physical exercise, and keep his hands busy.

QUESTIONS FROM MOTHERS

Stuttering Through Imitation

To the Editor:—Will you tell me whether small children, less than 6 years of age and some just learning to talk, are affected by daily companionship with an adult who stammers and, if so, how seriously? Should teachers who stammer be employed in our schools?

F. W., Indiana.

Answer.—The question as to whether or not children stutter through imitation has often been raised; but experience over a long period of time has shown that the danger of children learning to stutter through imitation is negligible. In one nursery school in which there were several stuttering children, none of the other children imitated them. At a summer school for children in which some were stutterers and some were not, there never occurred a case of a child stuttering through imitation. However, occasional instances have been seen in which a child stuttered because a mother or father stutters; but this is because the child identifies himself with the parent or, in other words, is so closely attached to the parent that he imitates everything the parent does, even to his stutter. In a case of brothers who were closely attached to one another, the younger boy not only imitated his older brother's walk and manner but also his stutter.

Whether school teachers who stutter should be retained is difficult to say. If the teachers are efficient in all other ways, they probably should not be discharged unless there is definite proof that children were stuttering through imitation. If the symptoms are not severe, the teachers could take treatment for stuttering, which in such cases might help the teacher to avoid the stutter in the classroom.

Congenital Syphilis

To the Editor:—At what age is a child afflicted with congenital syphilis most likely to have his first open sores?

E. M., Pennsylvania.

Answer.—The majority of babies with congenital or prenatal syphilis appear entirely normal at birth, though occasionally a baby may have obvious syphilis of the skin when born. As the baby becomes older, syphilis of the skin is seen with increasing frequency. By 1 month of age, skin syphilis has developed in about a third of the babies who are to have it. By 2 months of age another third of the babies show evidence in the skin. In the remainder the cutaneous lesions develop after this time. The skin lesions of the baby usually are not what one would call open sores but are more of the nature of a rash, often very slightly raised above the general level of the skin. Except in the most severe infections the skin is not broken. Even though the skin is not broken the disease may be communicated to others, because the spirochetes that cause the disease are plentiful in the areas affected by the rash and can be found easily in the outer layers of the skin in these areas. The rash is more abundant on the arms, legs and face than it is on the body.

Allergy to Eggs

To the Editor:—My baby has an allergy to eggs, which may be only temporary, as he did not have any trouble until a serious illness in December. In a list of substitutes for allergic foods, I note duck eggs. We raise ducks, but I have not given their eggs to the baby. Why should they not cause allergic reactions? Do duck eggs cause a severe enteritis?

A. D., Connecticut.

Answer.—If the child is sensitive to chicken eggs, he will almost invariably be sensitive to the eggs of all other fowl. The proteins of the eggs of all birds are related. While it is possible that a child may be sensitive to chicken eggs without being sensitive to duck eggs, because of some difference between the proteins of the two, this would rarely be the case.

Duck eggs, if fresh, should cause no more difficulty in a normal person than chicken eggs.

QUESTIONS AND ANSWERS (Continued from page 653)

Infantile Paralysis

To the Editor:—Can a person who had infantile paralysis ten years ago be regarded as a carrier of the disease at the present time? Will such a person permanently remain a carrier? C. J., Illinois.

Answer.—Knowledge as to the mode of transmission in infantile paralysis is far from complete and your questions cannot be answered with certainty. Evidence indicates that transmission is by direct personal contact of the susceptible individual with active cases of infantile paralysis or with healthy carriers recently exposed to the active disease. The transfer is accomplished by the secretions from the nose and throat.

That the virus does exist in the secretions of the upper respiratory tract of persons having infantile paralysis in the acute stage is a well established fact. Just how long it remains there, however, is not known. The general belief among medical men is that the virus of infantile paralysis disappears from the mucous membranes of the nose and throat of the average case within three weeks from the time of the onset of the disease.

This belief is based chiefly, first, on the work of Drs. Flexner and Amoss who, although able to recover the virus from the tonsils and adenoids of patients who had died of infantile paralysis, were unable to duplicate the finding in convalescent patients that were subjected to surgical removal of these same tissues 8 to 150 days following the onset of the disease; and second, on the universal observation that spread of this disease rarely, if ever, occurs in hospitals where patients in the late convalescent or paralytic stage of the disease remain for long periods of time in close contact with nurses, doctors and patients hospitalzied for other reasons.

On the other hand it must be admitted that the idea of the chronic carriage of the virus by persons afflicted with infantile paralysis has been used by some observers to account for the fact that epidemics are more apt to recur in a locality previously affected than in one that has remained free and for the fact that second cases sometimes occur in families after an interval of some years. Such reasoning is, of course, speculative and in the latter instance at least, the occurrence of the second cases can be just as readily explained on the basis of hereditary susceptibility.

In conclusion, then, a ten year carriage of the virus of infantile paralysis by a person permanently crippled as a result of that disease is quite unlikely.

Seasickness and the Heart

To the Editor:—Please tell me what effect seasickness actually has on the human heart.

H. B. B., Nebraska.

Answer.—Severe prolonged seasickness may cause dehydration, signs of acute starvation, rapid heart action, low blood pressure and other evidence of shock rather than evidence of heart failure. It is also possible that stomach upsets may cause the onset of disordered or irregular action of the heart. Shock is due to a loss of tone in the arteries and capillaries and to their resulting inability to play their normal role in connection with the maintenance of adequate circulation of the blood. These are all functional changes from which the normal individual recovers promptly when the cause is removed.

Seasickness that is less severe in intensity or of shorter duration, of course, may cause some of these symptoms, but they will be less marked.

The symptoms arising as a result of prolonged severe seasickness are at the time alarming. Commonly they are not so much the result of disturbances in the heart as of disturbances in the blood vessels. It is only when irregularity develops that the heart is directly involved. Such irregularity disappears with recovery from the seasickness; there are no permanent effects on the healthy heart.

Those with active infection of the heart should not travel at all. Those with the results of a healed infection of the heart, with arteriosclerotic heart disease with or without high blood pressure who, when on land, get symptoms on slight exertion and are known to be prone to develop seasickness, should not travel by sea. They may travel otherwise with safety, even with benefit, if their activity is no greater than it would be if they had remained at home.

America's Best Known Baby..

...KEEPS CLOSE WATCH ON VITAMINS

No ordinary farms can supply vegetables for Gerber's Baby Foods. Only specially selected soil is used. It is planted with pedigreed seeds to produce fine healthy crops, rich in food values so necessary to baby's sound development. But it is not enough to grow vegetables which are *extra* nourishing. Their precious food elements must be preserved to a high degree for baby.

PRECIOUS FOOD VALUES GUARDED!

Gerber's use four separate controls to safeguard valuable vitamins and minerals. (1) Vegetables are grown on nearby farms to prevent loss of body-building substances through lengthy transportation. (2) Cooking is done in closed containers. (3) Temperature is controlled. (4) Moisture is evaporated—so that water soluble minerals are not poured off.

Make certain your baby gets ample amounts of body-building foods. Make certain you buy the baby products bearing the picture of America's Best-Known Baby!

Visit the exhibit "The First Year of Life" in the Hall of Man at the New York World's Fair.

Gerber's
Baby Foods

APRICOT AND APPLE SAUCE
APPLE SAUCE ... BEETS ... CARROTS
CEREAL ... GREEN BEANS ... LIVER
SOUP WITH VEGETABLES ... MEATLESS SOUP ... PEAS ... PRUNES
SPINACH
VEGETABLE SOUP

NEW—GERBER'S CEREAL FOOD

Nourishing, digestible, tasty. Ready-to-serve to your baby. . . . For *free* sample write Gerber's, Dept. 127, Fremont, Mich.

NEW... a CREAM DEODORANT

which safely

STOPS *under-arm* PERSPIRATION

1. Does not harm dresses, does not irritate skin.
2. No waiting to dry. Can be used right after shaving.
3. Instantly checks perspiration 1 to 3 days. Removes odor from perspiration, keeps armpits dry.
4. A pure, white, greaseless, stainless vanishing cream.
5. Arrid has been awarded the Approval Seal of The American Institute of Laundering for being harmless to fabric.

39¢ a jar

Also in 10¢ and 59¢ jars

15 MILLION jars of Arrid have been sold . . . Try a jar today—at any store which sells toilet goods.

ARRID

SEX EDUCATION PAMPHLETS

A Series by Dr. Thurman B. Rice

★ **THE STORY OF LIFE**

For boys and girls ten years of age, telling them how the young come to plants, cold-blooded animals, domestic animals, and human parents.

★ **IN TRAINING**

For boys of high school age, interpreting their adolescent development in terms of athletic and other achievements which they can understand and admire.

★ **HOW LIFE GOES ON**

For girls of high school age, explaining how they are to be mothers of the men of tomorrow.

★ **THE AGE OF ROMANCE**

For young men and women, dealing with the problem as a unit for both sexes instead of segregating the information for each sex as in the older, teaching methods. The method is frank, courageous and idealistic.

★ **THE VENEREAL DISEASES**

For both sexes, high school age or older. Straightforward and complete but not morbid. As in the preceding pamphlet, the information is given for both sexes to both sexes.

Prices

25 cents each; set of 5 in file case, **$1.00**
5 to 50 copies, assorted, **20 cents each**
51 to 100 copies, assorted, **16 cents each**
101 to 500 copies, assorted, **14 cents each**

(Remittance in full must accompany each order)

File Case

AMERICAN MEDICAL ASSOCIATION • 535 N. Dearborn St., Chicago

Lordosis

To the Editor:—Do back bends (without bending the knees and with abdomen tucked in) increase lordosis? I am interested in dancing which calls for these back bends, but if they tend to encourage lordosis, I would most certainly forgo them.

G. C., New York.

Answer.—Back bends as involved in dancing, necessarily imply a great increase in the lordosis and unless such back bends are accompanied by exercises in the opposite direction, a definite increase in the lordosis might be expected.

Lordosis is the forward curve of the lower spine and is often referred to as hollow back, and is a peculiar development which has occurred in man assuming an upright position. Primates, such as the orang-utang and gorilla, have no lordosis and walk with the spine partially flexed throughout the lumbar and dorsal areas. Newborn human babies have no lordosis and do not develop any until they begin to assume the upright position in sitting and especially on standing. In the evolution of human beings from the horizontal position, as found in the four-footed animals, to the upright position in bipeds, or human beings, about 60 per cent of the rotation from the horizontal to the upright has taken place at the hip joints. The remaining 30 per cent has occurred through the development of the anterior angulation at the lower lumbar spine. Any exercise increasing this curve will of necessity stretch out the supporting ligaments and cause slipping of the small joints at the sides of the vertebrae.

Many persons counteract the lordosis instinctively by sitting on the floor with the knees drawn up under the chin, by sitting with the knees over the arm of the chair or sitting on one foot while at the dinner table. These persons generally are more comfortable when they are in bed, assuming a position of the knees in close approximation to the chest or chin.

Exercises designed to correct the lordosis must stretch certain groups of muscles of the lower spine, as well as the ligaments, and also strengthen the muscles of the abdominal wall and the hips.

SCHOOL and HEALTH

Conducted by **J. MACE ANDRESS, Ph.D.**

PACKING THAT BOOK BAG

THE long anticipated day is at hand. Your marks are in; your reports are finished; your routine duties are at an end. Your desk is cleared. You glance around your classroom for a final check-up. There is nothing more to do. You are a free person. The vacation calls you. The pleasant problem before you is to apply psychology and hygiene to your own life so that when you return in the fall you will be recreated physically and mentally. Even with the most successful of years behind you, still you look forward to those glorious weeks that stretch out before you. They go so quickly that you will want to make the most of them. You may now rush off to your room to pack your belongings in pursuit of some grand adventure.

At this time of year your plans are pretty well developed. Each person's plan springs from some vital need. Different teachers have such different needs. Some will want to travel in distant lands and come back with the memories of wider horizons for the inspiration of themselves and their pupils. Many more will want to pursue new academic and professional courses in summer schools. Others will want to rusticate on an old farm, camp among the mountains or indulge some chosen hobby. At this moment you may be weary of schools and reading; but if you give your mind a rest for even a week or so, it will surprise you how it will snap back again into normal action. You may become hungry for good books, possibly serious books.

What will you put into that old book bag? That will depend on your particular hunger and reading tastes. Perhaps you have felt for some time that your soul was starved for poetry. In that case, drop a volume of Tennyson, Shakespeare, Milton, Burns or Whittier into the bag. If the masters do not intrigue you, regale yourself with the wholesome nonsense of Ogden Nash. In your local library there are books of travel, adventure, fiction, biography, history and science that may be loaned for the entire vacation. There are all kinds of books to attract you. The feast is spread. If your local library does not have what you want, it is surprising to find what books they may borrow for you free or for a nominal sum. Those who wish to know what the cream of our recent best books is will consult a list like that prepared by Asa Don Dickinson, page 66 of *The Journal* of the Na-

What will you pack in that reading bag when you take your long awaited vacation? Though you may be tired of reading now, it won't be long before you'll want to again.

H. Armstrong Roberts

tional Education Association, March 1939.

Possibly your mind may gravitate toward books on health. You may read for pure fun or with some notion as to finding something that may be useful in your teaching next year. You may read of stories, incidents and discoveries that may do much to enrich your health lessons.

Here is one suggestion. If you take HYGEIA regularly, you may read it hurriedly and either skim some articles or omit them entirely. Put two or three issues in your bag. Look over the articles that you may not even have seen when the magazine was delivered. Reread some articles that you just glanced over. You will be surprised to see how much escaped you. If you keep in mind the health problems your classes in hygiene or science may have in the fall, you will find many helpful notes and suggestions. One teacher keeps a card catalog of references to HYGEIA. The cataloging is done each month by her pupils.

To help you fill your bag just glance over some of the titles of the new books on health. There is an excellent list in the book review department of HYGEIA. There you will find books about health heroes, nutrition, new conquests of disease, recent discoveries and new solutions to health problems.

The School Lunch in Education

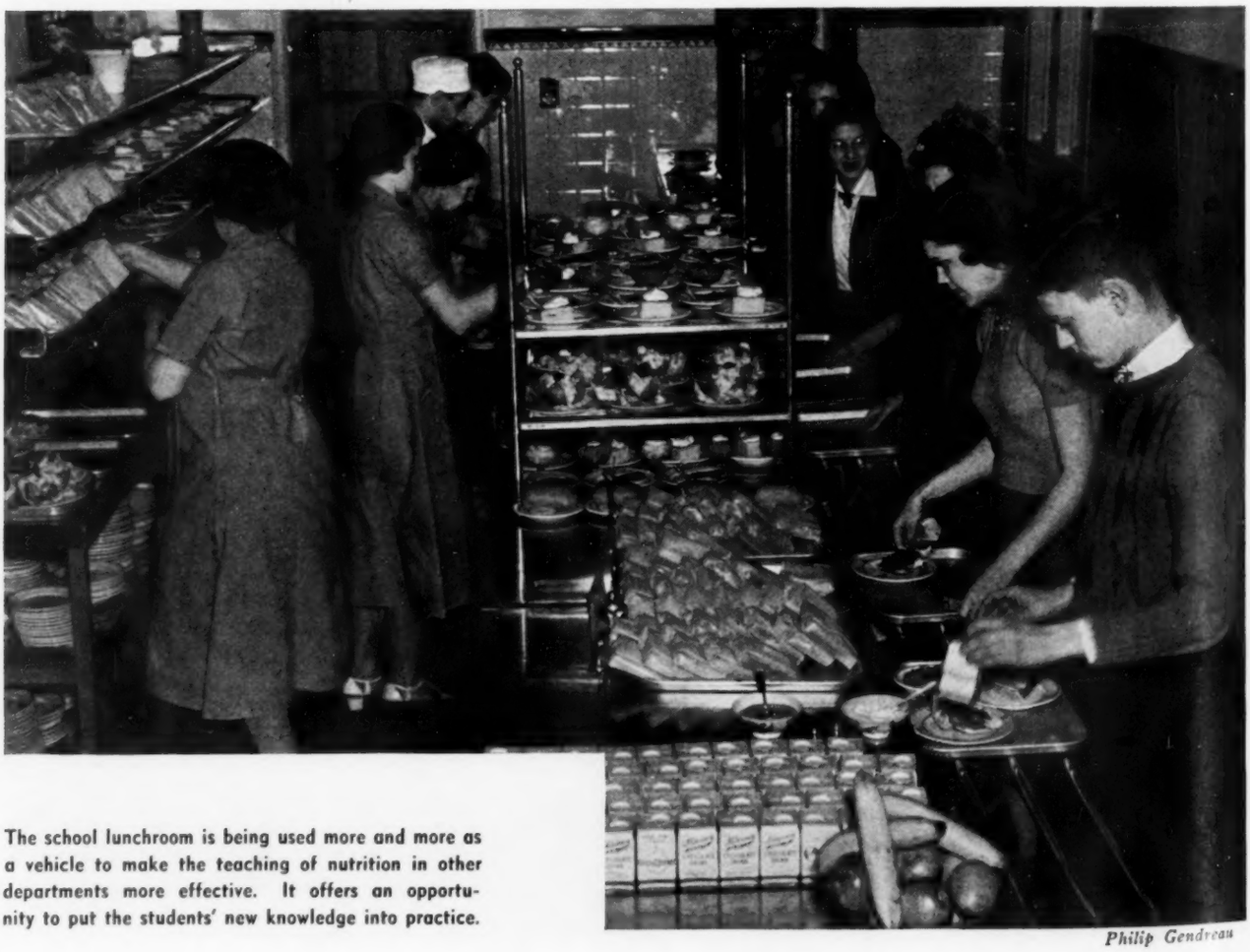
By JEAN V. LATIMER

The school lunch has now come to be regarded as one of the most important means of training boys and girls in the art of healthy living. Jean V. Latimer, coordinator of health education for the Massachusetts Department of Public Health, tells some interesting stories about school lunches in the eleventh article of her series on "Little Journeys Among High Schools."

THE Massachusetts Department of Public Health has for a long time been interested in promoting better school lunches. In 1934 it was shown from a survey of 47,000 school lunches in eighty-seven cities and towns that the great majority of pupils did not have a well balanced or adequate lunch. Significant progress has been made, especially in the past three years, since the Division of Child Hygiene has been able to employ a nutritionist who devotes her time almost solely to service on school lunch matters throughout the state.

Not only in observations in my field trips to schools, where I am frequently entertained for the noon meal, but in conferences with this staff nutritionist have I heard of improvement.

Last fall a school superintendent enrolled in a health education class, which I am conducting in cooperation with the University Extension



The school lunchroom is being used more and more as a vehicle to make the teaching of nutrition in other departments more effective. It offers an opportunity to put the students' new knowledge into practice.

Philip Gendreau

Division of the Massachusetts Department of Education, and became interested in the first problem which I assigned for investigation, as follows: "Make a survey of your own school or schools to ascertain what health education activities are already being carried on. What health activities need to be added?" Investigation of this problem revealed that in the splendid new high school which had been built recently, no cooking facilities had been installed as equipment for preparing a school lunch. I advised this superintendent to confer with our nutritionist, with the result that she was sent to assist this school and to suggest equipment and space which could be arranged for a school cafeteria. With the cooperation of the school superintendent, the help of the school nurse, a member of the school committee and the local organization of the Parent-Teacher Association, this equipment has now been improvised.

There is also evidence that health teaching in the classroom is being carried on in relation to the school lunch. When the junior high school pupils are drinking too little milk at noon, I find some schools showing moving pictures about milk and its value. The pupils then check their milk consumption and attempt to show improvement as they go through high school.

The school lunchroom is being increasingly used as a vehicle to make the teaching of other departments regarding healthful foods more effective. Not long ago in a junior high school a teacher told me that much interest had been developed by giving a multiple choice test regarding nutrition. I was particularly impressed by the following question which she had worked out:

Of the following, the best combination for a school lunch is:
..... hot roast beef sandwich, potatoes and rolls
..... macaroni, salad, rolls and cake
..... banana fritters, milk and rolls
..... soup, vegetable salad, roll, fruit and milk

In relation to the study of calories this teacher had had each pupil tabulate his caloric requirements and the kind of lunch that he should have in relation to the other two meals eaten during the day. This teacher found helpful such pamphlets on nutrition as those issued by the Massachusetts Department of Public Health called "Food Check for High School Pupils," "Food for the Teens" and "A Measuring Stick for a Good School Lunch."

Food models illustrating the various types of food combinations for lunch have also been loaned from this division. Accompanying such exhibits have been bar graphs showing the food value of each item. One high school boy, on seeing this exhibit, exclaimed, "Oh boy, I'm not going around the corner for my hot dog and soda pop any more, because I don't get my money's worth according to those graphs!"

In another high school the pupils themselves had made a study of the lunchroom practices, including such items as:

Number buying lunch at school
Number bringing lunch from home
Number buying supplement for home lunch
Number buying food outside of school
Average amount spent by pupil for regular lunch
Average amount spent by pupil for supplemented lunch
Average amount spent for candy, cake and packaged crackers or potato chips
Supplementary food for the home-packed lunch which could be purchased at the school cafeteria for 5 cents and for 10 cents.
Luncheon standards, as follows:
Average amount of time allowed for eating
Is air in room fresh?
Is temperature right?
Is atmosphere peaceful?
Do you help to keep the room neat?
Do you use the facilities for washing hands before eating lunch?

The same class had planned posters and bulletin board displays, which helped to promote better lunches.

We have found that the problem common to practically all is how to motivate better food selection on the part of the pupils. In this we need not only classroom teaching but cooperation on the part of the cafeteria managed. One manager reports that when she removed the trays from her counter to a side table, the general appearance of the counter was improved. Also, posters suitable to the various holidays as they came along made the room colorful. She had also provided a pleasant place in which to stimulate the pupils to try soups and other hot dishes rather than to munch a single sandwich. In another school lunchroom, fruit was sold at 2 cents to cut down the sale of penny and nickel candy bars. Variety and novelty, too, are worthwhile considerations in this problem of promoting better food selection. Many managers say that meat loaf with potato and vegetable is a favorite, but when hamburgers and cole slaw are on the menu there is a greater demand. All agree that the best way to get a child to make the right choices is to serve wholesome, palatable food, attractively displayed.

The state department of public health has found that the nutritionist can further help those engaged in school lunch work by conducting refresher conferences. For the past three years such a course has been held under the joint auspices of the departments of education and public health at a summer session of one of the state teachers colleges. Ninety trained and untrained lunchroom managers have attended during that time.

An interesting contribution of the managers at a recent conference was their material on food costs and selling price. Some reported selling milk, salads and the main dish with a vegetable at near cost to help meet the needs of the children. Some sell milk, fruit and vegetables below cost to encourage sales of protective foods. Desserts, candy, potato chips and other resale foods were selling at higher cost to make them less desirable or were entirely removed from the menu. In some schools candy was being sold by the student government to finance a trip to Washington or to buy new uniforms for the band or new equipment for the football team. Such procedure is undesirable, since it attracts money that otherwise might be spent for protective foods, such as milk or fruit, and also hinders health teaching in the classrooms. The nutritionist has suggested in some instances that the candy be sold only during the last ten minutes of the lunch period and that fruit or wholesome cookies be substituted when possible.

But we do see growth in the realization that the school lunch is an essential part of the health teaching and health protective aspects of the high school's program for health.

To Contributors:—*The editor of the School and Health Department will be pleased to receive articles dealing with the actual solution of concrete and practical health education problems in the school. Contributions on general theory are not solicited. Articles must not exceed 1,000 words in length and must be typewritten double spaced. Stamps should accompany manuscrips to insure their return if rejected. All articles accepted will be paid for at regular rates. Address Editor of School and Health Department of* HYGEIA, *67 Clyde Street, Newtonville, Mass.*

What Happens to Foods in the Body

By ETHEL AUSTIN MARTIN

The mystery of what happens to the food in the body may become a fascinating study through carefully planned experiments. Mrs. Martin, director of the Nutrition Service of the National Dairy Council outlines such experiments in the eleventh article of her series on "Food experiments for the Classroom." They may be carried on with little expense or effort in an ordinary classroom. If you try them, you will capture the interest of your pupils.

IN the ten preceding articles of this series, foods have been considered from the standpoint of the dietary essentials which they contain. The two remaining articles, together with the experiments which they include, will be devoted to processes which must take place in the body in making these food essentials useful to us. The present article consists chiefly of simple experiments which demonstrate digestive processes similar to those which take place in the body. The experiments described here are not intended to give a complete picture of the many steps necessary to the digestion of foods. They present merely a few isolated processes which will interest children and which can be easily reproduced in the classroom. Students will understand the following experiments more fully if they are introduced in connection with classroom subjects which provide a background for appreciation of the importance of the digestive processes described.

How Foods Are Digested

Problem (1)

To see whether starch and sugar dissolve in water.

Materials

Sugar
Cornstarch
Water
Test tubes

Nineteenth Experiment

Put ½ teaspoonful sugar in a test tube. Add water until the test tube is half full. Place your thumb over the top of the test tube, and shake it for about one minute. Look carefully at the test tube. Is the liquid cloudy? Does the sugar settle to the bottom of the test tube? Repeat the experiment using cornstarch.

Results

Sugar dissolves in water. Starch does not dissolve in water.

Conclusions

Sugar can be used by the body more quickly than starch, because it dissolves in water.

The process of preparing foods in the body so that they will dissolve is called digestion. Because starch does not dissolve in water it must go through certain processes of digestion before it will dissolve. When it has passed through these changes it has become sugar.

Problem (2)

To see how the body changes starch to sugar.

Materials

Cracker crumbs
Tincture of iodine
Fehling's solution (Parts I and II)
Bunsen burner or other flame
Test tubes
Dropper

Twentieth Experiment

Test cracker crumbs for sugar (see first experiment) then for starch (see second experiment). Plain soda crackers give the characteristic blue color for starch with iodine but do not give a positive test for sugar.

Put ½ teaspoonful cracker crumbs in a test tube. Add enough of your own saliva to make about ⅓ full, and shake it thoroughly. Let the test tube stand about 20 minutes. Test for sugar. Note the change which has taken place.

Results

Cracker crumbs now show a test for sugar after being combined with saliva for a time as directed.

Conclusions

Saliva changes starch to sugar. A first step in the digestion of starch takes place, therefore, when starchy foods are mixed with saliva in the mouth.

Actually we do not usually allow our foods to remain long enough in the mouth to change starch to sugar. However, when starchy foods mixed with saliva are swallowed, the process continues in the stomach until the change is completed.

Problem (3)

To see how proteins are digested in the stomach.

Materials

Hard cooked egg white
Concentrated hydrochloric acid
Lactated pepsin
Test tubes and rack
Dropper
Gummed labels
Corks

Twenty-First Experiment

In each of four test tubes put about 1 teaspoonful hard cooked egg white which has been chopped fine. Add water until each tube is about ⅓ full. With the labels, number each tube; then treat as follows:

Tube No. 1—Leave as it is
Tube No. 2—Add 10 drops of hydrochloric acid
Tube No. 3—Add 10 drops of pepsin
Tube No. 4—Add 10 drops each of hydrochloric acid and of pepsin.

Place a cork in each tube, and set them in a warm place until class time the next day. Notice what happens to the egg white in each tube.

Results

Tube No. 1, liquid is clear, egg unchanged. Tubes No. 2 and No. 3 show only a slight change, scarcely noticeable. The liquid in Tube No. 4 has become cloudy, the amount of egg white is reduced, and the pieces left are smaller.

Conclusions

It requires both hydrochloric acid and pepsin to digest protein.

Both hydrochloric acid and pepsin are found in the stomach under normal conditions. They act together in digesting protein.

Problem (4)

To see what happens to milk in the stomach.

Materials

Milk
Rennet tablet
Test tube
Dropper
Bunsen burner or other flame

Twenty-Second Experiment

Warm gently about ⅓ test tube of milk. When a drop of milk on the wrist feels neither hot nor cold, the temperature is right. Then dissolve ¼ rennet tablet in a few drops of luke warm water, and add it to the milk. Set the test tube in a warm place for 15 minutes. Do not shake the tube during that time. At the end of the period, tip the tube, and note what has happened.

Results

The milk has become one solid mass.

Conclusions

Rennet added to milk under the conditions specified curdles it.

Rennet is an enzyme found in the stomach. It changes milk into a smooth curd. This process is called curdling. After milk is curdled in the stomach, the hydrochloric acid and pepsin act on it to digest it.

H. Armstrong Roberts

A Lesson in Dental Health Education

By **HARRIET M. FITZGERALD**

When children go to the dentist on their own initiative, we may know that their education in dental hygiene is successful. In the following article Harriet M. Fitzgerald, instructor in dental hygiene, University of California College of Dentistry, presents a lesson which has proved to be effective in teaching children. You may find some suggestions in it for your class.

WHEN Johnnie Jones, the freckled-faced newsboy, stops me on the street and says, "Miss Fitzgerald, you know that there cavity I had in my 6 year molar? Well, I had it filled." Now I haven't tried to teach Johnnie grammar, but I have taught him the terms "cavity" and "6 year molar." But the teaching of terms isn't all that counts. Johnnie's attitude and interest in the care of his teeth and their relationship to his health is what makes me feel that my efforts have not been in vain.

There is the case of Susie Smith who rushes up to me and says, "Mother's made an appointment to take me to the dentist. Do you think the decay will have reached the dentine before next Tuesday? My appointment isn't till then; Mother couldn't get it any sooner." Mother is naturally a bit embarrassed, but Susie and I are friends, so such a conversation doesn't disturb either Susie or me.

Such incidents occur almost daily in my life. How has this attitude been achieved? What methods have been employed? The answer is simply education in dental health from the time the child entered school. Various technics are employed in the primary grades, including stories, toothbrush drills and socialized discussions.

The following lesson on dental anatomy and tooth decay is an example of our instructional technic in the upper grades. This lesson is suitable for grades four, five and six.

Materials:

1. Crayons, red and yellow.
2. Paper with a picture showing an outline of 6 year molar. It may be made on a duplicating machine.
3. Pencils.

Instruction technic:

A. The picture sheet is given out. The dental hygienist tells the children to take their rulers and draw four or five lines across the blank side of the paper for some sentences. She then writes the following sentences on the blackboard, and tells them to copy them:

1. This is a cross section of a lower 6 year molar.
2. The 6 year molar is a permanent tooth.
3. I should have four 6 year molars.

B. The paper is then turned over, and the following instructions are given:

1. Color the pulp, or the nerve, red.

2. The dental hygienist or teacher holds the paper up and asks the question, "Where is the pulp or nerve?" The answer is the "center section." However, if children have never had any previous dental instruction, it would be well for the teacher to make a drawing of the tooth on the blackboard. She shall then suggest that the children color it red. A discussion should follow as to why it was colored red, being sure to explain that there is always blood in the pulp.

3. Color the dentine yellow. (That is the part next to the pulp which is in the center.)

4. The outside covering, the enamel, is not colored and remains white.

5. Color the gums light red.

C. Label each part with pencil, including the roots, gums, enamel, dentine and the pulp. An arrow should point to each. The dental hygienist or teacher illustrates these directions by drawing on the blackboard and labeling parts.

D. After the labeling is completed, have the child take his red crayon and put narrow light red lines from the pulp to the dentine. Explain to the children that these lines represent nerves.

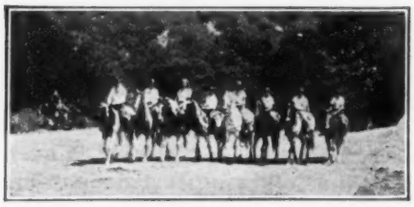
Discussion technic:

A. Some cavities can be filled with little or no pain. This is because the cavity is small and is only in the enamel.

B. When cavities hurt as the dentist fills the tooth, it is an indication that the dentine has been penetrated by the decay. The small nerves in the dentine cause this feeling.

C. When cavities are painful as soon as the dentist touches the tooth, it indicates a cavity already

Schools and Camps



Has your child heart trouble, asthma, diabetes, nephritis?

He may lead a normal life, grow strong and learn in the sunshine at

La Loma Feliz
SANTA BARBARA, CALIFORNIA
Ina M. Richter, Med. Dir.
John A. Robinson, Senior Master.

Schools and Camps for Exceptional Children

● TROWBRIDGE TRAINING SCHOOL ●
Home school for nervous, backward children. "*Best in the West.*" Beautiful buildings. Spacious grounds. Experienced teachers. Individual supervision. Resident physician. Enrolment limited. Endorsed by physicians, educators. Booklet. E. Haydn Trowbridge, M.D., 1810 Bryant Bldg., Kansas City, Mo.

THE MARY E. POGUE SCHOOL for exceptional children. Individual instruction, speech correction. Separate buildings for boys, girls. Epileptics accepted. **G. H. Marquardt, medical director. W. H. Holmes, consultant. Gerard N. Krost, pediatrician. 80 Geneva Road, Wheaton, Ill.**

Beverly Farm, Inc. Home and school for nervous and backward children and adults. Successful, social and educational adjustments. Occupational therapy. Dept. for birth injury cases. Healthfully situated on 220-acre tract, 1 hr. from St. Louis. 7 well-equipped buildings, gymnasium. 41st year. Catalog. Groves Blake Smith, M.D., Supt., Box H, Godfrey, Ill.

WILSON SCHOOLS
Year 'round home school for exceptional children. Individual instruction. Only college trained teachers. Medical supervision. Beautiful buildings and grounds. **SPEECH CORRECTION.** Reasonable rates. An ethical school. 9 Arnold Place, Dayton, Ohio.

Pamphlets on
THE TEETH

THE CARE OF THE TEETH, by W. M. Gardner.
Causes and prevention of dental decay and pyorrhea; dentifrices and mouth washes; brushing-with-pressure method; cooperation with dentist. 27 pages. **15 cents.**

OUR FOOD AND OUR TEETH, by Percy R. Howe.
4 pages. **5 cents.**

TAKING THE CHILD TO THE DENTIST, by William M. Gardner. 4 pages. **5 cents.**

DENTAL NOSTRUMS AND THE PUBLIC HEALTH, by Samuel M. Gordon and Eleanore B. Dufour.
A reprint from *Hygeia* of three articles on the promotion of dental nostrums and dentifrices. 32 pages. **10 cents.**

AMERICAN MEDICAL ASSOCIATION
535 North Dearborn Street Chicago, Illinois

in the dentine. Preceding the dental visit, there may have been sensation when something hot or cold or sweet was eaten.

D. When the tooth aches and the face has become swollen, it is an indication that the decay has probably reached the pulp. If it has, the pulp dies, and the tooth becomes abscessed. Extraction is usually the result.

E. This entire process of decay reaching the pulp can be prevented by the detection of small pit cavities through regular periodic examinations by a dentist. These cavities should be filled when in the enamel.

F. Other factors in addition to regular care are necessary in order to insure good dental health. These factors include adequate nutrition and mouth hygiene.

If it is possible an examination by a dentist or a dental hygienist should be made prior to this lesson. At the conclusion of this lesson, the names of those who have good teeth can be read aloud to the class, and they will write the following:

My 6 year molars are good.

Those children with defects in their 6 year molars will write:

My 6 year molar has a cavity.

The dental hygienist or dentist will then outline the cavity in pencil, and the child is instructed to color it brown and label it *cavity*. The child is then told to take this lesson home and show it to his parents. Statistics of the percentage of children with good teeth do not give the true picture of what one has taught in health education. They do serve as an index to determine whether one is achieving part of his goal. The goals in health education should be the inculcation of right attitudes and habits in health in addition to the correction of existing defects.

Railroading children through dental clinics or eye clinics or rushing through physical examinations is not health education. It will show only that certain children have had corrections made and others have defects. It doesn't mean that children will continue to care for their health after they are through school and have regular examinations.

That the attitude of the learner plays an important part in all learning is a psychologic fact. The attitude of the children toward the teaching of dental health is such that it inspires one to go on teaching. The clapping of hands, the joyous expressions of the faces of children and the profound interest which is given to my lessons make me feel that the children have the right attitude and at least some knowledge of dental hygiene.

Mental Disorders

Among persons with mental disorders, the death of mothers appears to have a significantly higher incidence than the death of fathers, a study reported in the *American Journal of Orthopsychiatry* indicates.

The investigator, H. Barry Jr., Boston, obtained records for 306 male and 243 female psychotic patients, all of whom were first admitted to mental institutions between the ages of 16 and 25. He found that 15.7 per cent had lost their mothers during childhood, as compared with an average of 5.3 per cent bereavement of mothers among several control groups of normal individuals of the same ages. The incidence of paternal bereavement among the patients was 11.1 per cent, which is only slightly more than that in the normal control groups (10 per cent).

SAFETY SONNETS

–National Safety Council

Dog bites should have immediate attention, and the advice of a family physician should be followed.

CAMP COUNSEL (Continued from page 603)

hour in time, the store be closed until after the rest hour. Arrange activities of the afternoon so as not to demand early afternoon appointments.

There are wide differences of practice regarding rest periods and just as wide differences of opinion as to what activities, if any, should be allowed during rest periods. It is my firm opinion that if rest means as nearly complete muscular relaxation as possible and an accompanying mental relaxation, then *no* activities of any sort should be engaged in. Complete relaxation, quiet and even sleep should not only be encouraged but made possible so far as the conditions can be controlled.

Many campers would drop off to sleep at least for a few minutes, if they had the chance and if it was "being done." Too often, the need of sleep or rest is regarded as a sign that, in campers' parlance, "you can't take it." This unfortunate, though real, attitude should be eliminated.

Letter-writing should be reserved for a time free for such activities later in the day or at least some other time. Some camps have too much activity, thus making it necessary to infringe on this rest period for minor duties, thereby practically nullifying any possible good that might come from such a rest period.

Counselors should constantly be on the alert to see that beds are properly made and are as comfortable as possible. Instructions in making beds for overnight camping should be given before going on the trips if possible. At least such instruction should be a part of the trip if it is impossible to get it in beforehand. A well conducted camp should be alert to its responsibility for giving each boy and girl the opportunity of learning how to "sleep out" with comparative comfort.

Campers should not be awakened as in one camp I visited where the booming of a cannon nearly blew the campers out of bed each morning. Various other ingenious devices have been proudly exhibited as means of quickly getting the campers out of bed. It is a violation of hygienic principles to be thus awakened.

It follows that the practice of allowing a short time to get out of bed and into line for morning exercises is also hygienically undesirable. It is often a fine way of starting the day off on the "wrong foot" for many campers. The morning exercises had best be forgotten in favor of a more leisurely getting up. It might be pointed out, though, that from other points of view it is equally bad to have campers hold back the whole group by being deliberately slow in getting up. Either they are not getting enough sleep, or something in the nature of a change of attitude needs to be brought about in such individuals.

[NOTE.—Mr. Riggs will conclude this article in the August issue.]

In science, a law is not a rule imposed from without, but an expression of an intrinsic process.

—*Clifford Allbutt.*

More than 2,000,000 persons have migrated from the city to rural life in the last three years.

WE THANK YOU

We think it timely and appropriate that we thank you, the readers of HYGEIA, for the interest that you are showing in our products and Service.

At the National Convention of the American Medical Association, recently held in St. Louis, Missouri, many of you were kind enough to visit our exhibit and tell us that you look for our advertisement each month in HYGEIA.

We enjoy knowing you through this splendid medium and greatly appreciate your response.

LUZIER'S INC., MAKERS OF FINE COSMETICS
Kansas City, Missouri

Medical News

OF THE MONTH

Heredity and Disease

An interesting example of the part heredity may play in disease is shown by the study of the family history of two brothers suffering from perforating ulcers of the feet, Leandro M. Tocantins, M.D., and Hobart A. Reimann, M.D., Philadelphia, report in *The Journal* of the American Medical Association.

Numerous defects were found in eighteen members of the family, representing four generations. In addition to the ulcers such as the two brothers had, other predominating disorders were impaired reflexes of the eyes, arms and legs, cleft palate, harelip and decreased or increased sensation to the stimuli of heat and touch. Epileptic-like attacks also were found in a few instances. The two doctors believe the defects are best attributed to some malfunction of the germ plasm at conception, resulting in defective development in the central nervous system.

Soap Irritation

Neither the alkali nor the fatty factor is wholly responsible for the irritation sometimes produced by soap, but each is a contributing factor, I. H. Blank, Boston, concluded in a recent issue of the *Archives of Dermatology and Syphilology.*

A Bright Outlook

The outlook for infantile paralysis is much brighter than the public commonly believes, William R. Van Duzer, M.D., Casey, Ia., maintained recently in the *Journal of the Iowa State Medical Society.*

"A common belief among the laity," he said, "is that infantile paralysis is a terrible disease, that so far the medical profession knows very little about it and has very little to offer in the way of treatment.

"However, several of the childhood diseases, such as measles, diphtheria, scarlet fever and tuberculosis, have a much higher mortality rate and leave more permanent crippling than infantile paralysis has ever done. Moreover, the medical profession, during the last ten or fifteen years, has made rapid strides along the line of treatment.

"It is generally believed that almost every one at some time in his life has either had or been exposed to infantile paralysis and that a large percentage of these cases have not been diagnosed or recognized. However, of the recognized cases, statistics show that only about 25 per cent develop paralysis to a minor or extreme degree and that of this 25 per cent about twelve to 15 per cent are left with a residual or permanent paralysis."

Prompt Hospitalization

Prompt hospitalization for all children with severe burns is imperative because the outcome of such cases is very uncertain and cannot be predicted on the basis of the area involved by the burn, Harry M. Blackfield, M.D., and Leon Goldman, M.D., San Francisco, declare in *The Journal* of the American Medical Association.

They point out that while mortality from burns has been decreasing in the last two decades, burns are still responsible for an unnecessary number of deaths in children. In the United States approximately 40 per cent of all deaths from this cause occur in children less than 15 years of age, and three fourths of these deaths occur in children under 5 years. Stoves, grates, hot water, steam and matches are the chief agencies of injury.

The use of oily salves and ointments for severe burns is to be condemned, the physicians declare. Instead, they recommend tannic acid or tea, silver nitrate and gentian violet.

Exaggerated Claims

The advent of potent male hormone preparations has resulted in exaggerated claims and theories which expand beyond the limits of reasonable speculation, Walter M. Kearns, M.D., Milwaukee, declares in *The Journal* of the American Medical Association.

"The medical literature," he states, "is already being cluttered with premature reports demonstrating a lack of knowledge that may result in confusion on the part of the physician attempting to gain an understanding of a most complicated and profound problem."

Kerosene

Contact with kerosene was the probable cause of a rare type of anemia in a fatal case reported in the *Medical Annals* of the District of Columbia by John R. Cavanagh, M.D., and Paul R. Wilner, M.D., Washington, D. C.

In this disease, known as aplastic anemia, the bone marrow cells cease to produce white blood cells in sufficient amounts to compensate for their natural destruction.

The patient, a woman of 59, had rubbed her legs with household kerosene nightly for several months in the belief that it was a remedy for "stiff joints." In addition to the skin contact there was undoubtedly considerable inhalation of the fumes.

This case, the authors believe, is the first one reported in which disease involving abnormal composition of the blood was attributed to kerosene. Other toxic effects of kerosene have been reported, such as gastrointestinal, pulmonary, neurologic and skin disturbances.

Adequate Diet

An adequate diet, not vitamin concentrates, should be depended on to prevent nutritive failure, James S. McLester, M.D., Birmingham, Ala., states in *The Journal* of the American Medical Association. Diets which are fully suitable for prevention are generally inadequate for treatment after nutritional disease has made its appearance, he says. In America nutritional failure is seldom complete, and when and if present it is not often due to a deficiency of a single food.